

Intel® Server Chassis SC5300, SC5300 LX and SC5300 BRP User Guide

**A Guide for Technically Qualified Assemblers of Intel® Identified
Subassemblies/Products**

Order Number: C51486-003

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Intel server boards contain a number of high-density VLSI and power delivery components that need adequate airflow for cooling. Intel's own chassis are designed and tested to meet the intended thermal requirements of these components when the fully integrated system is used together. It is the responsibility of the system integrator that chooses not to use Intel developed server building blocks to consult vendor datasheets and operating parameters to determine the amount of airflow required for their specific application and environmental conditions. Intel Corporation can not be held responsible if components fail or the server board does not operate correctly when used outside any of their published operating or non-operating limits.

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Preface

About this Manual

Thank you for purchasing and using the Intel® Server Chassis SC5300.

This manual is written for system technicians who are responsible for troubleshooting, upgrading, and repairing this server chassis. This document provides a brief overview of the features of the chassis, a list of accessories or other components you may need, troubleshooting information, and instructions on how to add and replace components on the Intel® Server Chassis SC5300. For the latest version of this manual, refer to <http://support.intel.com/support/motherboards/server/chassis/SC5300>.

Manual Organization

Chapter 1 provides a brief overview of the Server Chassis SC5300. In this chapter, you will find a list of the server chassis features, photos of the product, and product diagrams to help you identify components and their locations.

Chapter 2 provides instructions on adding and replacing components. Use this chapter for step-by-step instructions and diagrams for installing or removing components such as the front bezel, floppy drive, peripheral drives, and other components.

Chapter 3 provides information on maintaining your server. In this chapter, you will find step-by-step instructions and diagrams for replacing fans, power supply and other components.

Chapter 4 provides technical reference information. In this chapter, you will find information on power supply and system environmental specifications.

Intel® Serverboard Compatibility

The server chassis is compatible with the following Intel® Server Boards:

- Intel® Server Board SE7525GP2
- Intel® Server Board SE7320SP2
- Intel® Server Board SE7520BD2
- Intel® Server Board SE7520AF2

For information about which items have been tested and can be used with your chassis, and for ordering information for Intel products, see

<http://support.intel.com/support/motherboards/server//chassis/SC5300/compat.htm>.

Additional Information and Software

If you need more information about this product or information about the accessories that can be used with this server chassis, use the following resources:

For in-depth technical information about this product, including BIOS settings and chipset information	Intel® Server Chassis SC5300 Technical Product Specification at http://support.intel.com/support/motherboards/server/chassis/sc5300/sb/CS-012478.htm .
If you just received this product and need to install it	Intel® Server Chassis SC5300 Quick Start User's Guide in the product box
For the latest product information	http://support.intel.com/support/motherboards/server/chassis/SC5300
Spares and Accessories	http://support.intel.com/support/motherboards/server/sb/CS-012636.htm
Server boards that are compatible with this chassis	http://support.intel.com/support/motherboards/server/sb/CS-012479.htm
For virtual system tours and interactive repair information	http://developer.intel.com/design/servers/smarttool/index.htm

Safety Information



WARNING

Before working with your server product, whether you are using this guide or any other resource as a reference, pay close attention to the safety instructions. You must adhere to the assembly instructions in this guide to ensure and maintain compliance with existing product certifications and approvals. Use only the described, regulated components specified in this guide. Use of other products / components will void the UL listing and other regulatory approvals of the product and will most likely result in noncompliance with product regulations in the region(s) in which the product is sold.

Emissions Disclaimer

To ensure EMC compliance with your local regional rules and regulations, the final configuration of your end system product may require additional EMC compliance testing. For more information please contact your local Intel Representative.

See “Regulatory and Integration Information” for product Safety and EMC regulatory compliance information. **This is an FCC Class A device. Integration into a Class B chassis does not result in a Class B device.**

Intended Uses

This product was evaluated as Information Technology Equipment (ITE), which may be installed in offices, schools, computer rooms, and similar commercial type locations. The suitability of this product for other product categories and environments (such as: medical, industrial, telecommunications, NEBS, residential, alarm systems, test equipment, etc.), other than an ITE application, may require further evaluation.

EMC Testing

Before computer integration, make sure that the chassis, power supply, and other modules have passed EMC testing using a server board with a microprocessor from the same family (or higher) and operating at the same (or higher) speed as the microprocessor used on this server board.



Warnings

System power on/off: The power button DOES NOT turn off the system AC power. To remove power from system, you must unplug the AC power cord from the wall outlet. Make sure the AC power cord is unplugged before you open the chassis, add, or remove any components.

Hazardous conditions, devices and cables: Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cord, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

Electrostatic discharge (ESD) and ESD protection: ESD can damage disk drives, boards, and other parts. We recommend that you perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist

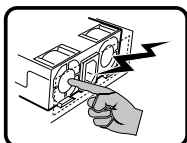
strap attached to chassis ground—any unpainted metal surface—on your server when handling parts.

ESD and handling boards: Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

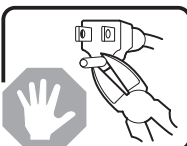
Installing or removing jumpers: A jumper is a small plastic encased conductor that slips over two jumper pins. Some jumpers have a small tab on top that you can grip with your fingertips or with a pair of fine needle nosed pliers. If your jumpers do not have such a tab, take care when using needle nosed pliers to remove or install a jumper; grip the narrow sides of the jumper with the pliers, never the wide sides. Gripping the wide sides can damage the contacts inside the jumper, causing intermittent problems with the function controlled by that jumper. Take care to grip with, but not squeeze, the pliers or other tool you use to remove a jumper, or you may bend or break the stake pins on the board.

Safety Cautions

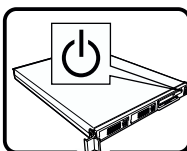
Read all caution and safety statements in this document before performing any of the instructions. See also <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm> .



The power supply in this product contains no user-serviceable parts. There may be more than one supply in this product. Refer servicing only to qualified personnel.



Do not attempt to modify or use the supplied AC power cord if it is not the exact type required. A product with more than one power supply will have a separate AC power cord for each supply.

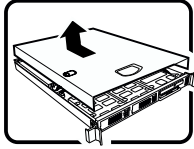
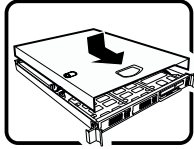
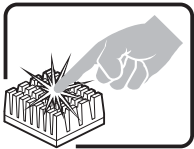




The power button on the system does not turn off system AC power. To remove AC power from the system, you must unplug each AC power cord from the wall outlet or power supply. The power cord(s) is considered the disconnect device to the main (AC) power. The socket outlet that the system plugs into shall be installed near the equipment and shall be easily accessible.



SAFETY STEPS: *Whenever you remove the chassis covers to access the inside of the system, follow these steps:*

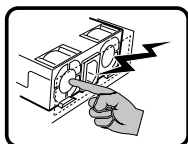
1. *Turn off all peripheral devices connected to the system.*
2. *Turn off the system by pressing the power button.*
3. *Unplug all AC power cords from the system or from wall outlets.*
4. *Label and disconnect all cables connected to I/O connectors or ports on the back of the system.*
5. *Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist*

	<p>strap attached to chassis ground of the system—any unpainted metal surface—when handling components.</p>
	<p>6. Do not operate the system with the chassis covers removed.</p> <p>After you have completed the six SAFETY steps above, you can remove the system covers. To do this:</p> <ol style="list-style-type: none"> 1. Unlock and remove the padlock from the back of the system if a padlock has been installed. 2. Remove and save all screws from the covers. 3. Remove the covers.
	<p>For proper cooling and airflow, always reinstall the chassis covers before turning on the system. Operating the system without the covers in place can damage system parts. To install the covers:</p> <ol style="list-style-type: none"> 1. Check first to make sure you have not left loose tools or parts inside the system. 2. Check that cables, add-in boards, and other components are properly installed. 3. Attach the covers to the chassis with the screws removed earlier, and tighten them firmly. 4. Insert and lock the padlock to the system to prevent unauthorized access inside the system. 5. Connect all external cables and the AC power cord(s) to the system.
	<p>A microprocessor and heat sink may be hot if the system has been running. Also, there may be sharp pins and edges on some board and chassis parts. Contact should be made with care. Consider wearing protective gloves.</p>
	<p>Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Dispose of used batteries according to manufacturer's instructions.</p>
	<p>The system is designed to operate in a typical office environment. Choose a site that is:</p> <ul style="list-style-type: none"> Clean and free of airborne particles (other than normal room dust). Well ventilated and away from sources of heat including direct sunlight. Away from sources of vibration or physical shock. Isolated from strong electromagnetic fields produced by electrical devices. <p>In regions that are susceptible to electrical storms, we recommend you plug your system into a surge suppresser and disconnect telecommunication lines to your modem during an electrical storm.</p> <p>Provided with a properly grounded wall outlet.</p> <p>Provided with sufficient space to access the power supply cord(s), because they serve as the product's main power disconnect.</p>

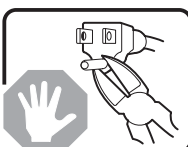
Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warn- und Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel-Serverplatinen und -Servergehäusen unter

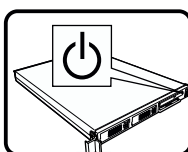
<http://support.intel.com/support/motherboards/server/sb/CS-010770.htm> .



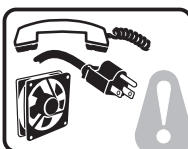
Benutzer können am Netzgerät dieses Produkts keine Reparaturen vornehmen. Das Produkt enthält möglicherweise mehrere Netzgeräte. Wartungsarbeiten müssen von qualifizierten Technikern ausgeführt werden.



Versuchen Sie nicht, das mitgelieferte Netzkabel zu ändern oder zu verwenden, wenn es sich nicht genau um den erforderlichen Typ handelt. Ein Produkt mit mehreren Netzgeräten hat für jedes Netzgerät ein eigenes Netzkabel.

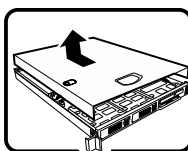


Der Wechselstrom des Systems wird durch den Ein-/Aus-Schalter für Gleichstrom nicht ausgeschaltet. Ziehen Sie jedes Wechselstrom-Netzkabel aus der Steckdose bzw. dem Netzgerät, um den Stromanschluß des Systems zu unterbrechen.



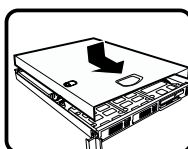
SICHERHEISSMASSNAHMEN: Immer wenn Sie die Gehäuseabdeckung abnehmen um an das Systeminnere zu gelangen, sollten Sie folgende Schritte beachten:

1. Schalten Sie alle an Ihr System angeschlossenen Peripheriegeräte aus.
2. Schalten Sie das System mit dem Hauptschalter aus.
3. Ziehen Sie den Stromanschlußstecker Ihres Systems aus der Steckdose.
4. Auf der Rückseite des Systems beschriftet und ziehen Sie alle Anschlußkabel von den I/O Anschlüssen oder Ports ab.
5. Tragen Sie ein geerdetes Antistatik Gelenkband, um elektrostatische Ladungen (ESD) über blanke Metallstellen bei der Handhabung der Komponenten zu vermeiden.
6. Schalten Sie das System niemals ohne ordnungsgemäß montiertes Gehäuse ein.



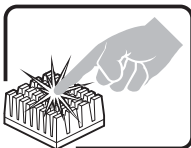
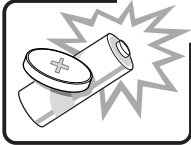
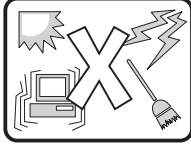
Nachdem Sie die oben erwähnten ersten sechs SICHERHEITSSCHRITTE durchgeführt haben, können Sie die Abdeckung abnehmen, indem Sie:

1. Öffnen und entfernen Sie die Verschlusseinrichtung (Padlock) auf der Rückseite des Systems, falls eine Verschlusseinrichtung installiert ist.
2. Entfernen Sie alle Schrauben der Gehäuseabdeckung.
3. Nehmen Sie die Abdeckung ab.



Zur ordnungsgemäßen Kühlung und Lüftung muß die Gehäuseabdeckung immer wieder vor dem Einschalten installiert werden. Ein Betrieb des Systems ohne angebrachte Abdeckung kann Ihrem System oder Teile darin beschädigen. Um die Abdeckung wieder anzubringen:

1. Vergewissern Sie sich, daß Sie keine Werkzeuge oder Teile im Innern des Systems zurückgelassen haben.
2. Überprüfen Sie alle Kabel, Zusatzkarten und andere Komponenten auf ordnungsgemäßen Sitz und Installation.
3. Bringen Sie die Abdeckungen wieder am Gehäuse an, indem Sie die zuvor gelösten Schrauben wieder anbringen. Ziehen Sie diese gut an.
4. Bringen Sie die Verschlusseinrichtung (Padlock) wieder an und schließen Sie diese, um ein unerlaubtes Öffnen des Systems zu verhindern.
5. Schließen Sie alle externen Kabel und den AC Stromanschlußstecker Ihres Systems

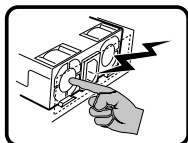
	<p>wieder an.</p> <p>Der Mikroprozessor und der Kühler sind möglicherweise erhitzt, wenn das System in Betrieb ist. Außerdem können einige Platinen und Gehäuseteile scharfe Spitzen und Kanten aufweisen. Arbeiten an Platinen und Gehäuse sollten vorsichtig ausgeführt werden. Sie sollten Schutzhandschuhe tragen.</p>
	<p>Bei falschem Einsetzen einer neuen Batterie besteht Explosionsgefahr. Die Batterie darf nur durch denselben oder einen entsprechenden, vom Hersteller empfohlenen Batterietyp ersetzt werden. Entsorgen Sie verbrauchte Batterien den Anweisungen des Herstellers entsprechend.</p>
	<p>Das System wurde für den Betrieb in einer normalen Büroumgebung entwickelt. Der Standort sollte:</p> <ul style="list-style-type: none"> sauber und staubfrei sein (Hausstaub ausgenommen); gut gelüftet und keinen Heizquellen ausgesetzt sein (einschließlich direkter Sonneneinstrahlung); keinen Erschütterungen ausgesetzt sein; keine starken, von elektrischen Geräten erzeugten elektromagnetischen Felder aufweisen; in Regionen, in denen elektrische Stürme auftreten, mit einem Überspannungsschutzgerät verbunden sein; während eines elektrischen Sturms sollte keine Verbindung der Telekommunikationsleitungen mit dem Modem bestehen; mit einer geerdeten Wechselstromsteckdose ausgerüstet sein; über ausreichend Platz verfügen, um Zugang zu den Netzkabeln zu gewährleisten, da der Stromanschluß des Produkts hauptsächlich über die Kabel unterbrochen wird.

重要安全指导

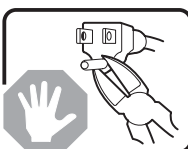
在执行任何指令之前，请阅读本文档中的所有注意事项及安全声明。和/或<http://support.intel.com/support/motherboards/server/sb/CS-010770.htm> 上的 *Intel Server Boards and Server Chassis Safety Information* (《Intel 服务器主板与服务器机箱安全信息》)。

Consignes de sécurité

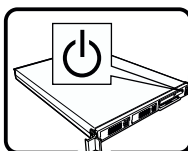
Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez *Intel Server Boards and Server Chassis Safety Information* sur le site <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm>.



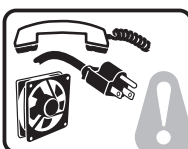
Le bloc d'alimentation de ce produit ne contient aucune pièce pouvant être réparée par l'utilisateur. Ce produit peut contenir plus d'un bloc d'alimentation. Veuillez contacter un technicien qualifié en cas de problème.



Ne pas essayer d'utiliser ni modifier le câble d'alimentation CA fourni, s'il ne correspond pas exactement au type requis. Le nombre de câbles d'alimentation CA fournis correspond au nombre de blocs d'alimentation du produit.

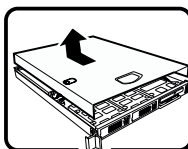


Notez que le commutateur CC de mise sous tension /hors tension du panneau avant n'éteint pas l'alimentation CA du système. Pour mettre le système hors tension, vous devez débrancher chaque câble d'alimentation de sa prise.



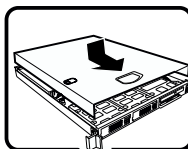
CONSIGNES DE SÉCURITÉ -Lorsque vous ouvrez le boîtier pour accéder à l'intérieur du système, suivez les consignes suivantes:

1. Mettez hors tension tous les périphériques connectés au système.
2. Mettez le système hors tension en mettant l'interrupteur général en position OFF (bouton-poussoir).
3. Débranchez tous les cordons d'alimentation c.a. du système et des prises murales.
4. Identifiez et débranchez tous les câbles reliés aux connecteurs d'E-S ou aux accès derrière le système.
5. Pour prévenir les décharges électrostatiques lorsque vous touchez aux composants, portez une bande antistatique pour poignet et reliez-la à la masse du système (toute surface métallique non peinte du boîtier).
6. Ne faites pas fonctionner le système tandis que le boîtier est ouvert.



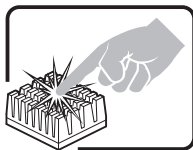
Une fois TOUTES les étapes précédentes accomplies, vous pouvez retirer les panneaux du système. Procédez comme suit:

1. Si un cadenas a été installé sur à l'arrière du système, déverrouillez-le et retirez-le.
2. Retirez toutes les vis des panneaux et mettez-les dans un endroit sûr.
3. Retirez les panneaux.

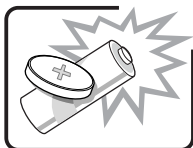


Afin de permettre le refroidissement et l'aération du système, réinstallez toujours les panneaux du boîtier avant de mettre le système sous tension. Le fonctionnement du système en l'absence des panneaux risque d'endommager ses pièces. Pour installer les panneaux, procédez comme suit:

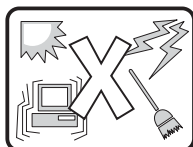
1. Assurez-vous de ne pas avoir oublié d'outils ou de pièces démontées dans le système.
2. Assurez-vous que les câbles, les cartes d'extension et les autres composants sont bien installés.
3. Revissez solidement les panneaux du boîtier avec les vis retirées plus tôt.
4. Remettez le cadenas en place et verrouillez-le afin de prévenir tout accès non autorisé à l'intérieur du système.
5. Rebranchez tous les cordons d'alimentation c. a. et câbles externes au système.



Le microprocesseur et le dissipateur de chaleur peuvent être chauds si le système a été sous tension. Faites également attention aux broches aiguës des cartes et aux bords tranchants du capot. Nous vous recommandons l'usage de gants de protection.



Danger d'explosion si la batterie n'est pas remontée correctement. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le fabricant. Disposez des piles usées selon les instructions du fabricant.



Le système a été conçu pour fonctionner dans un cadre de travail normal. L'emplacement choisi doit être:

Propre et dépourvu de poussière en suspension (sauf la poussière normale).

Bien aéré et loin des sources de chaleur, y compris du soleil direct.

A l'abri des chocs et des sources de vibrations.

Isolé de forts champs électromagnétiques géénérés par des appareils électriques.

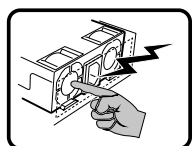
Dans les régions sujettes aux orages magnétiques il est recomandé de brancher votre système à un supresseur de surtension, et de débrancher toutes les lignes de télécommunications de votre modem durant un orage.

Muni d'une prise murale correctement mise à la terre.

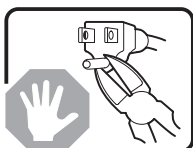
Suffisamment spacieux pour vous permettre d'accéder aux câbles d'alimentation (ceux-ci étant le seul moyen de mettre le système hors tension).

Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea *Intel Server Boards and Server Chassis Safety Information* en <http://support.intel.com/support/motherboards/server/sb/CS-010770.htm> .

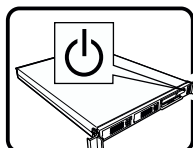


El usuario debe abstenerse de manipular los componentes de la fuente de alimentación de este producto, cuya reparación debe dejarse exclusivamente en manos de personal técnico especializado. Puede que este producto disponga de más de una fuente de alimentación.




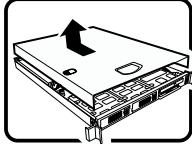
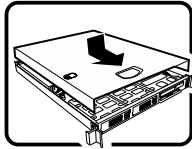
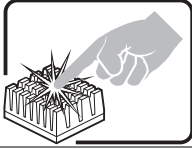
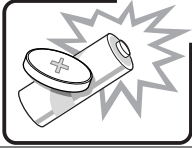
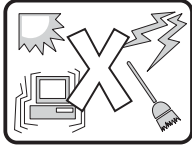
No intente modificar ni usar el cable de alimentación de corriente alterna, si no corresponde exactamente con el tipo requerido.

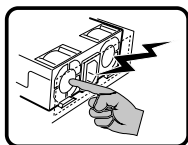
El número de cables suministrados se corresponden con el número de fuentes de alimentación de corriente alterna que tenga el producto.



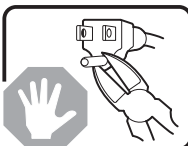
Nótese que el interruptor activado/desactivado en el panel frontal no desconecta la corriente alterna del sistema. Para desconectarla, deberá desenchufar todos los cables de corriente alterna de la pared o desconectar la fuente de alimentación.

INSTRUCCIONES DE SEGURIDAD: Cuando extraiga la tapa del chasis para acceder al interior del sistema, siga las siguientes instrucciones:

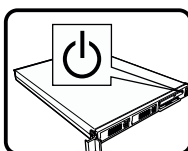
	<ol style="list-style-type: none"> 1. Apague todos los dispositivos periféricos conectados al sistema. 2. Apague el sistema presionando el interruptor encendido/apagado. 3. Desconecte todos los cables de alimentación CA del sistema o de las tomas de corriente alterna. 4. Identifique y desconecte todos los cables enchufados a los conectores E/S o a los puertos situados en la parte posterior del sistema. 5. Cuando manipule los componentes, es importante protegerse contra la descarga electrostática (ESD). Puede hacerlo si utiliza una muñequera antiestática sujeta a la toma de tierra del chasis — o a cualquier tipo de superficie de metal sin pintar. 6. No ponga en marcha el sistema si se han extraído las tapas del chasis.
	<p>Después de completar las seis instrucciones de SEGURIDAD mencionadas, ya puede extraer las tapas del sistema. Para ello:</p> <ol style="list-style-type: none"> 1. Desbloquee y extraiga el bloqueo de seguridad de la parte posterior del sistema, si se ha instalado uno. 2. Extraiga y guarde todos los tornillos de las tapas. 3. Extraiga las tapas.
	<p>Para obtener un enfriamiento y un flujo de aire adecuados, reinstale siempre las tapas del chasis antes de poner en marcha el sistema. Si pone en funcionamiento el sistema sin las tapas bien colocadas puede dañar los componentes del sistema. Para instalar las tapas:</p> <ol style="list-style-type: none"> 1. Asegúrese primero de no haber dejado herramientas o componentes sueltos dentro del sistema. 2. Compruebe que los cables, las placas adicionales y otros componentes se hayan instalado correctamente. 3. Incorpore las tapas al chasis mediante los tornillos extraídos anteriormente, tensándolos firmemente. 4. Inserte el bloqueo de seguridad en el sistema y bloquéelo para impedir que pueda accederse al mismo sin autorización. 5. Conecte todos los cables externos y los cables de alimentación CA al sistema.
	<p>Si el sistema ha estado en funcionamiento, el microprocesador y el disipador de calor pueden estar aún calientes. También conviene tener en cuenta que en el chasis o en el tablero puede haber piezas cortantes o punzantes. Por ello, se recomienda precaución y el uso de guantes protectores.</p>
	<p>Existe peligro de explosión si la pila no se cambia de forma adecuada. Utilice solamente pilas iguales o del mismo tipo que las recomendadas por el fabricante del equipo. Para deshacerse de las pilas usadas, siga igualmente las instrucciones del fabricante.</p>
	<p>El sistema está diseñado para funcionar en un entorno de trabajo normal. Escoja un lugar:</p> <ul style="list-style-type: none"> Limpio y libre de partículas en suspensión (salvo el polvo normal). Bien ventilado y alejado de fuentes de calor, incluida la luz solar directa. Alejado de fuentes de vibración. Aislado de campos electromagnéticos fuertes producidos por dispositivos eléctricos. <p>En regiones con frecuentes tormentas eléctricas, se recomienda conectar su sistema a un eliminador de sobrevoltage y desconectar el módem de las líneas de telecomunicación durante las tormentas.</p> <p>Provisto de una toma de tierra correctamente instalada.</p> <p>Provisto de espacio suficiente como para acceder a los cables de alimentación, ya que éstos hacen de medio principal de desconexión del sistema.</p>



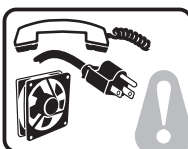
Rivolgersi ad un tecnico specializzato per la riparazione dei componenti dell'alimentazione di questo prodotto. È possibile che il prodotto disponga di più fonti di alimentazione.



Non modificare o utilizzare il cavo di alimentazione in c.a. fornito dal produttore, se non corrisponde esattamente al tipo richiesto. Ad ogni fonte di alimentazione corrisponde un cavo di alimentazione in c.a. separato.

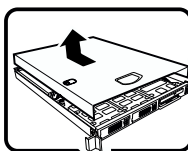


L'interruttore attivato/disattivato nel pannello anteriore non interrompe l'alimentazione in c.a. del sistema. Per interromperla, è necessario scollegare tutti i cavi di alimentazione in c.a. dalle prese a muro o dall'alimentazione di corrente.



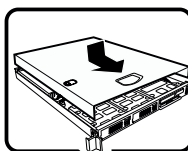
PASSI DI SICUREZZA: Qualora si rimuovano le coperture del telaio per accedere all'interno del sistema, seguire i seguenti passi:

1. Spegner tutti i dispositivi periferici collegati al sistema.
2. Spegner il sistema, usando il pulsante spento/acceso dell'interruttore del sistema.
3. Togliere tutte le spine dei cavi del sistema dalle prese elettriche.
4. Identificare e sconnettere tutti i cavi attaccati ai collegamenti I/O od alle prese installate sul retro del sistema.
5. Qualora si tocchino i componenti, proteggersi dallo scarico elettrostatico (SES), portando un cinghia anti-statica da polso che è attaccata alla presa a terra del telaio del sistema – qualsiasi superficie non dipinta – .
6. Non far operare il sistema quando il telaio è senza le coperture.



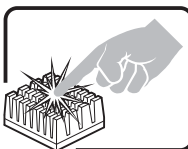
Dopo aver seguito i sei passi di SICUREZZA sopracitati, togliere le coperture del telaio del sistema come segue:

1. Aprire e rimuovere il lucchetto dal retro del sistema qualora ve ne fosse uno installato.
2. Togliere e mettere in un posto sicuro tutte le viti delle coperture.
3. Togliere le coperture.



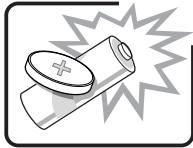
Per il giusto flusso dell'aria e raffreddamento del sistema, rimettere sempre le coperture del telaio prima di riaccendere il sistema. Operare il sistema senza le coperture al loro proprio posto potrebbe danneggiare i componenti del sistema. Per rimettere le coperture del telaio:

1. Controllare prima che non si siano lasciati degli attrezzi o dei componenti dentro il sistema.
2. Controllare che i cavi, dei supporti aggiuntivi ed altri componenti siano stati installati appropriatamente.
3. Attaccare le coperture al telaio con le viti tolte in precedenza e avvitarle strettamente.
4. Inserire e chiudere a chiave il lucchetto sul retro del sistema per impedire l'accesso non autorizzato al sistema.
5. Ricollegare tutti i cavi esterni e le prolunghie AC del sistema.

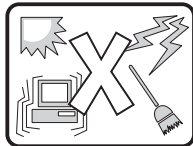


Se il sistema è stato a lungo in funzione, il microprocessore e il dissipatore di calore potrebbero essere surriscaldati. Fare attenzione alla presenza di piedini appuntiti e parti taglienti sulle schede e sul telaio. È consigliabile l'uso di guanti di protezione.

Esiste il pericolo di un'esplosione se la pila non viene sostituita in modo corretto. Utilizzare solo pile uguali o di tipo equivalente a quelle consigliate dal produttore. Per disfarsi delle pile



usate, seguire le istruzioni del produttore.



Il sistema è progettato per funzionare in un ambiente di lavoro tipo. Scegliere una postazione che sia:

Pulita e libera da particelle in sospensione (a parte la normale polvere presente nell'ambiente).

Ben ventilata e lontana da fonti di calore, compresa la luce solare diretta.

Al riparo da urti e lontana da fonti di vibrazione.

Isolata dai forti campi magnetici prodotti da dispositivi elettrici.


In aree soggette a temporali, è consigliabile collegare il sistema ad un limitatore di corrente.

In caso di temporali, scollegare le linee di comunicazione dal modem.

Dotata di una presa a muro correttamente installata.

Dotata di spazio sufficiente ad accedere ai cavi di alimentazione, i quali rappresentano il mezzo principale di scollegamento del sistema.

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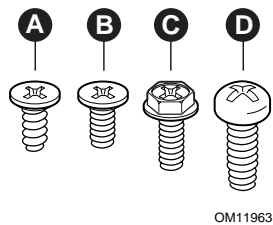
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1. Chassis Description

This document applies to the Intel® Server Chassis SC5300 Base, Intel® Server Chassis SC5300 Base Redundant Power (BRP) and Intel® Server Chassis SC5300 LX.

Kit Contents

The chassis subassembly kit includes one power cord, and a box that includes four chassis feet, a FDD plastic bezel, 10 extra hard disk drive rail black O-rings, 10 extra CD rail blue O-rings, a power cord retainer, an L-gasket, bumpers, a tie-down and four different types of mounting screws.



- A. Flat head 6-32 x 5mm [.200] C. Hex head 6-32 x 6mm [.256]
 B. Flat head M3 x 5mm [.200] D. Round head M4 x 8mm [.315]

Figure 1. Screw Description

Feature Summary

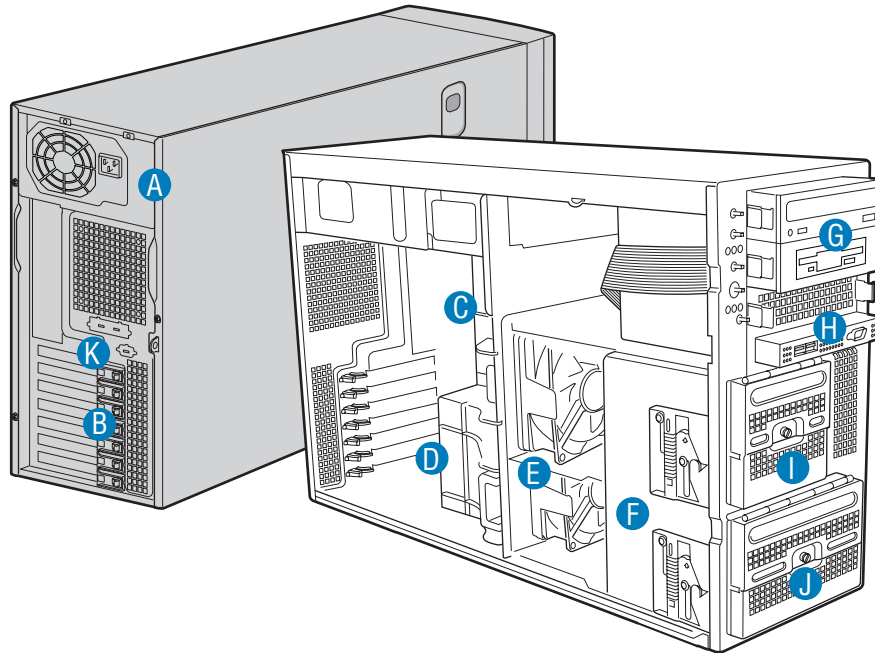
Table 1. Feature Summary

Feature	Intel® Server Chassis SC5300BASE Description	Intel® Server Chassis SC5300-BRP Description	Intel® Server Chassis SC5300LX Description
Peripheral Bays	3 multi-mount 5.25 peripheral bays		
Drive Bays (6 + 4) bay layout	<p>One fixed drive bay for up to six fixed IDE or SCSI drives.</p> <p>Optional hot-swap drive bays:</p> <ul style="list-style-type: none"> Six-drive SCSI Six-drive SATA Four-drive SCSI <p>An optional four-drive fixed drive bay is also available.</p> <p>Supports up to 6 drives, depending on peripheral choices. Refer to the power budget tool to determine if power is available to support more drives.</p>	<p>One fixed drive bay for up to six fixed IDE or SCSI drives.</p> <p>Optional hot swap drive bays:</p> <ul style="list-style-type: none"> Six-drive SCSI Six-drive SATA Four-drive SCSI <p>An optional four-drive fixed drive bay is also available.</p> <p>Supports up to 10 drives</p>	<p>One fixed drive bay for up to six fixed IDE or SCSI drives.</p> <p>Optional hot-swap drive bays:</p> <ul style="list-style-type: none"> Six- drive SCSI Six-drive SATA Four-drive SCSI <p>A optional four-drive fixed drive bay is also available.</p> <p>Supports up to 10 drives</p>
Expansion Slots	Six full-length PCI expansion slots are available.		
Form Factor	5U Tower, convertible to rack mount		

Chassis Description

Power Delivery	One fixed 600-W power supply with an integrated cooling fan. Upgradable to 730-W redundant power supplies	One redundant capable 730-W power supply module with an integrated cooling fan. Optional second redundant power supply module is available.	One redundant capable 730-W power supply module with an integrated cooling fan. Optional second redundant power supply module is available.
Cooling	Two fixed, non-redundant chassis fans: 1 120-mm fan 1 92-mm fan	Two fixed, non-redundant chassis fans: 1 120-mm fan 1 92-mm fan	Four hot-swap, redundant chassis fans: 2 120-mm fans 2 92-mm fans Note: You need to install an Intel® management module for the fans to be redundant.

Chassis Front View SC5300 Base

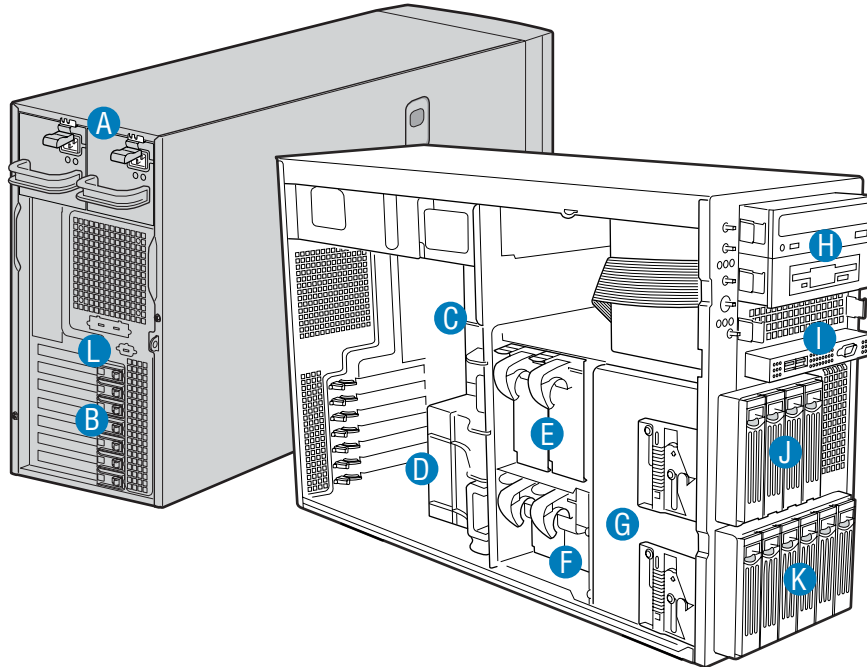


TP00532

- A. Fixed Power Supply
- B. PCI Add-in Card Panel
- C. Processor Air Duct
- D. PCI Air Duct
- E. Fixed Fans (2)
- F. Hard Drive Cage Release Mechanisms (2)
- G. 5.25-inch Device Bays (3)
- H. Front Panel USB/Serial B
- I. Fixed Drive Cage – 4-Drive (accessory)
- J. Fixed Drive Cage – 6-Drive
- K. Real Serial B Connector (optional)

Figure 2. Intel® Server Chassis SC5300 Base Front View

Chassis Front View SC5300 LX with Hot Swap Components

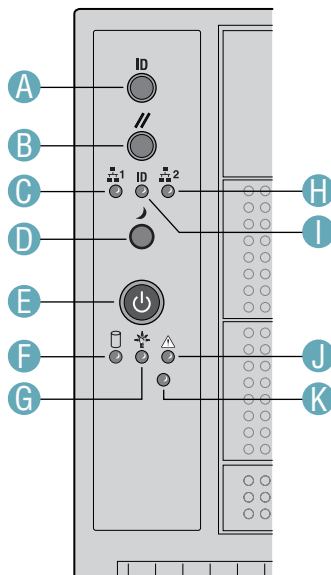


TP00557

- A. Hot Swap Power Supply/Second Hot Swap Power Supply (accessory)
- B. PCI Add-in Card Panel
- C. Processor Air Duct
- D. PCI Air Duct
- E. Hot Swap Fans – Large (2)
- F. Hot Swap Fans – Small (2)
- G. Hard Drive Cage Release Mechanisms (2)
- H. 5.25-inch Device Bays (3)
- I. Front Panel USB/Serial B
- J. Hot Swap Drive Cage – 4-Drive (accessory)
- K. Hot Swap Drive Cage – 6-Drive
- L. Rear Serial-B Connector (optional)

Figure 3. Intel® Server Chassis SC5300 LX Front View

Front Panel Controls and Indicators



TP00534

- A. ID Toggle Switch
- B. Reset Button
- C. NIC1 Activity LED (green)
- D. Sleep Button¹
- E. Power Button
- F. Hard Drive Activity LED (bi-color)
- G. Power/Sleep LED (green)
- H. NIC2 Activity LED (green)
- I. ID LED (blue)
- J. Status LED (bi-color)
- K. NMI Button

Figure 4. Pedestal Controls and Indicators

¹ Not active with current Intel® server boards.

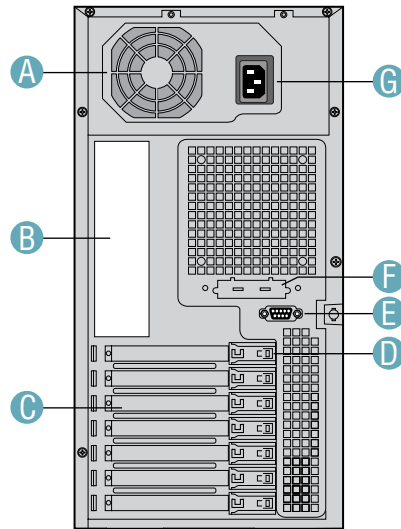
Descriptions of the front panel LEDs are listed in the following table. Refer to your server documentation for functionality of buttons.

Table 2. Front Panel LED Descriptions

LED Name	Color	Condition	Description
Power/Sleep LED	Green	ON	Power on
	Green	BLINK	Standby/Sleep (S1)
		OFF	Off (also Sleep S4)
Status	Green	ON	System ready
	Green	BLINK	System ready, but degraded: some CPU fault, DIMM killed
	Amber	ON	Critical alarm: Critical power module failure, critical fan failure, voltage (power supply), voltage and thermal fault
	Amber	BLINK	Non-critical failure: Redundant fan failure, redundant power failure, non-critical power and voltage
		OFF	System not ready: Post error/NMI event/PCI or terminator missing
Hard drive activity	Green	BLINK	Hard drive activity
	Amber	ON	Fault
		OFF	No activity
NIC1 activity	Green	ON	Linked
	Green	BLINK	LAN activity
		OFF	Idle
NIC2 activity	Green	ON	Linked
	Green	BLINK	LAN activity
		OFF	Idle
ID LED² (rack only)	Blue	BLINK	Server identification; Toggled by ID button or software
		OFF	Server identification; Toggled by ID button or software

² Not supported by all server boards.

Base Chassis Rear View

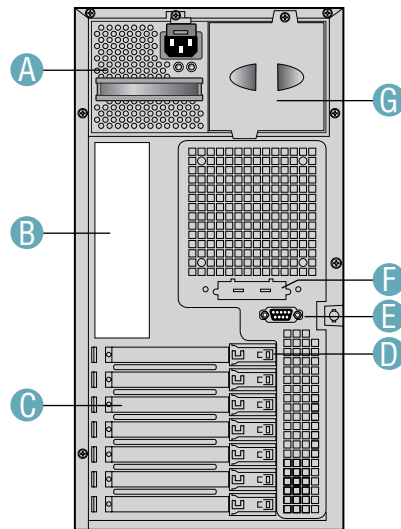


TP00526

- A. Fixed Power Supply
- B. I/O Ports
- C. PCI Add-in Card Slots
- D. PCI Card Latch
- E. Rear Serial B Connector (optional)
- F. ICMB or SCSI Knockout
- G. AC Power Connector

Figure 5. Intel® Server Chassis SC5300 Base Chassis Rear View

Base Redundant Power and SC5300 LX Chassis Rear View

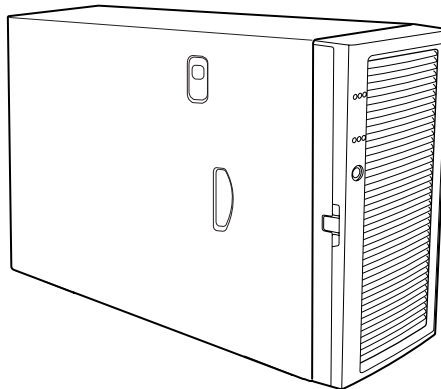


TP00540

- A. Removable Power Supply
- B. I/O Ports
- C. PCI Add-in Card Slots
- D. PCI Card Latch
- E. Rear Serial B Connector (optional)
- F. ICMB or SCSI Knockout
- G. Power Supply Filler Panel

Figure 6. Intel® Server Chassis SC5300 BRP and SC5300 LX Chassis Rear View

Chassis Side View



TP00533

Figure 7. Intel® Server Chassis SC5300 Side View

Peripherals

5.25-in Half-height Peripheral Bays

Note: One multi-purpose 5.25-in drive carrier is included with the chassis. This drive carrier can hold either a floppy drive (by removing the knock-out) or a fixed drive.

The upper bays of the server chassis are designed for removable media peripherals. Three 5.25-in, half-height drive bays are available for floppy, CD-ROM or tape drives.

Standard and Optional Hot Swap Drive Bays

One bay supporting six cabled drives respectively ships with the standard chassis. Optional hot swap drive bays may replace the six fixed drive bays. An optional four-drive fixed drive bay (for cabled drives) is available. No tools are required to replace the fixed drive bays.

Optional four- and six-drive SCSI and six-drive SATA hot swap drive bays are available.

Accessories and Order Codes

Spares and Accessories are detailed in the configuration guide for the server board.

For a complete list of Spares and Accessories, refer to the configuration guide stored on the Intel support site at:

<http://intel.com/support/motherboards/server/>

Table 3. Accessories and Order Codes

Accessory	Order Code
Rack Conversion Accessory Kit	ARIGRACK
Slimline CD Accessory Kit	ARIGCDFDBRK
4-Drive SCSI Hot Swap Drive Bay	AXX4SCSIDB
6-Drive SATA Drive Bay	AXX6SATADB
Hot Plug PCI Kit	ARIGHPPCI
4-Drive Fixed Drive Bay	AXX4FIXDB
LX Hot Swap Power Upgrade Kit	ARIGLXUPKIT
6-Drive SCSI Drive Bay	AXX6SCSIDB
Local Control Panel	AXXLCPPED

2. Setting Up the Chassis

This chapter describes how to set up your server chassis for the first time.

Tools and Supplies Needed

- Phillips (cross head) screwdriver (#2 bit)
- Small flat-head screwdriver
- Anti-static wrist strap (recommended)

Installation Safety Instructions

Only technically qualified personnel should integrate this assembly.

Follow these guidelines to meet and maintain safety and product regulatory requirements when integrating this chassis subassembly.

Read and adhere to all of these instructions and the instructions supplied with this assembly. If you do not follow these instructions, the UL listing will be void, and the product will most likely be non-compliant with other regional product laws and regulations.

Safety: Before You Remove the Access Cover

Before removing the access cover for any reason, observe these safety guidelines located in the preface of this guide:

- Turn off all peripheral devices connected to the server.
- Turn off the server by pressing the power button on the front of the chassis. Then unplug the AC power cord from the chassis or wall outlet.
- Label and disconnect all peripheral cables and all telecommunication lines connected to I/O connectors or ports on the back of the chassis.
- Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—when handling components.

Warnings and Cautions

These warnings and cautions apply whenever you remove the access cover(s) to access components inside the server. Only a technically qualified person should integrate and configure the server.



WARNINGS

The power button on the front panel DOES NOT turn off the AC power. To remove power from server, you must unplug the AC power cord from the wall outlet or the chassis.

Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cords, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.



CAUTIONS

ESD can damage disk drives, boards, and other parts. Perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—on your server when handling parts.

Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. Do not touch the connector contacts. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. If you place the server board on a conductive surface, the battery leads may short out. If they do, this will result in a loss of CMOS data and will drain the battery. Use a conductive foam pad if available. Do not slide board over any surface.

For proper cooling and airflow, always install the access cover before turning on the server. Operating it without the cover in place can damage system parts.

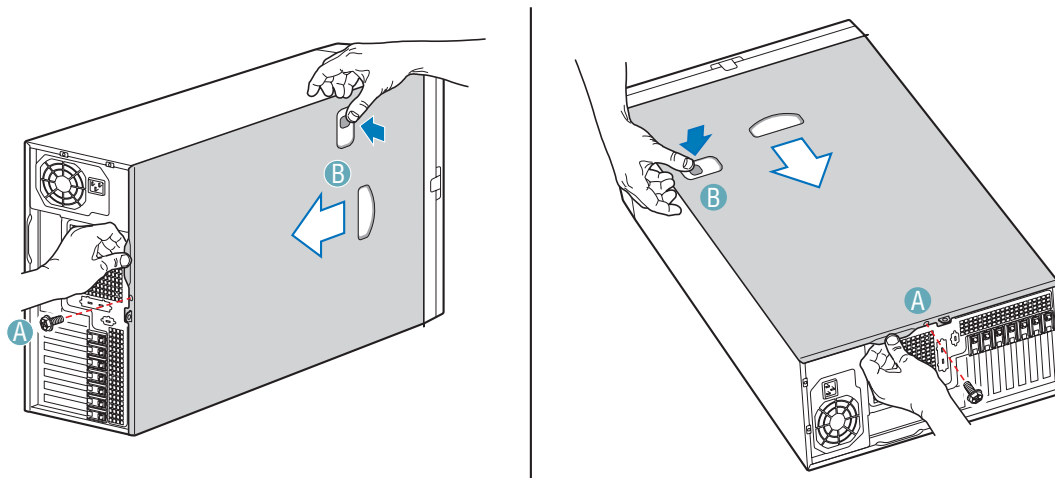
Remove Primary Access Cover

When facing the front of the chassis, the Primary Access cover is on the left-hand side for pedestal-mounted servers, and on top for rack-mounted servers.

⇒ **NOTE**

The front bezel also locks the primary access cover. Make sure the bezel lock is unlocked before proceeding.

1. Observe the safety and ESD precautions at the beginning of this chapter.
2. Power off the system and disconnect the power cable.
3. If the shipping screw is installed, remove it (letter “A”).
4. Press the latch (letter “B”) and slide the Primary Access Cover toward the rear of the chassis.
5. Lift the Primary Access Cover outward to remove it.



TP00912

Figure 8. Removing the Access Cover

Remove Bezel Assembly

⇒ NOTE

If the chassis is on its side, move the chassis to hang over the side of a table before proceeding.

1. Release the two plastic tabs (letter “A”) on the left side of the Bezel Assembly to disengage the tabs.
2. Rotate the Bezel Assembly (letter “B”) no more than 40 degrees outward.
3. At a 40-degree angle, push the Bezel Assembly away from the chassis (letter “C”). If Bezel Assembly does not immediately disconnect from the chassis, then tap the left-hand side of the Bezel Assembly to disengage the bezel hooks on the right-hand side of the chassis.

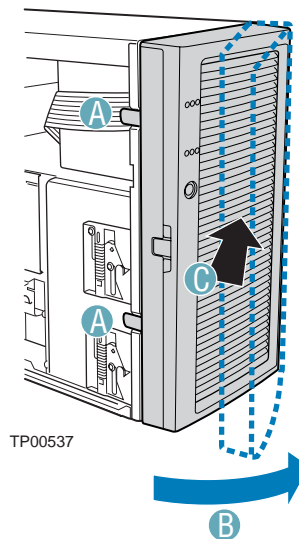
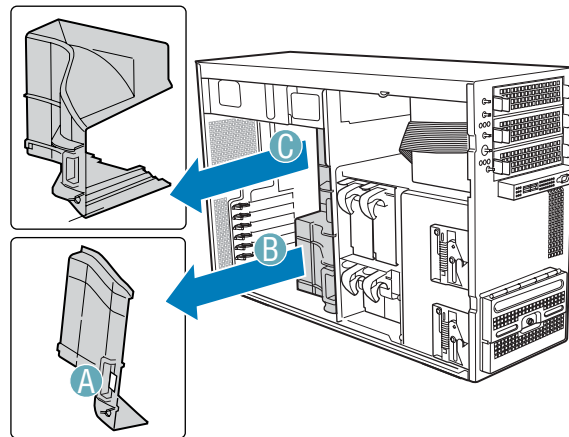


Figure 9. Removing Bezel Assembly

Remove Air Ducts

1. Press the latch (letter “A”) and remove the PCI air duct (letter “B”) from the chassis.
2. Remove the processor air duct (letter “C”).



TP00529

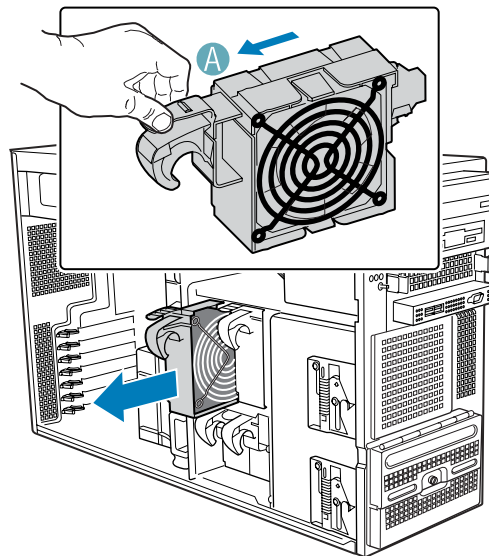
Figure 10. Removing Air Ducts

Remove Hot Swap Fans

⇒ NOTE

This step only applies to the Server Chassis SC5300LX and SC5300BRP configurations. The Server Chassis SC5300BASE configuration ships with fixed fans.

1. Press latch (letter “A”) on fan and pull on handle to remove Hot Swap Fan from chassis.
2. Repeat Step 1 for remaining hot swap fans.

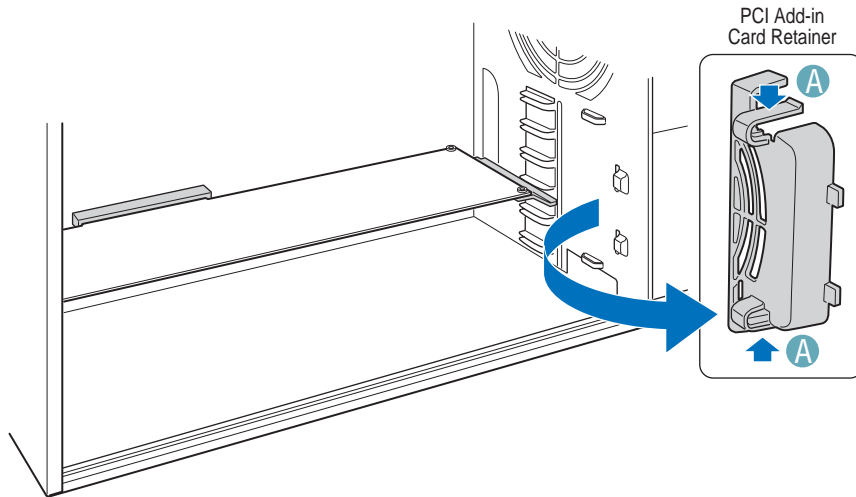


TP00908

Figure 11. Removing Hot Swap Fans

Route Power and Data Cables to the Fixed Drives

1. Press on two plastic tabs (letter “A”) and remove PCI Add-in Card Retainer and any full height PCI cards that may block access (this will allow access to the cable routing slot).



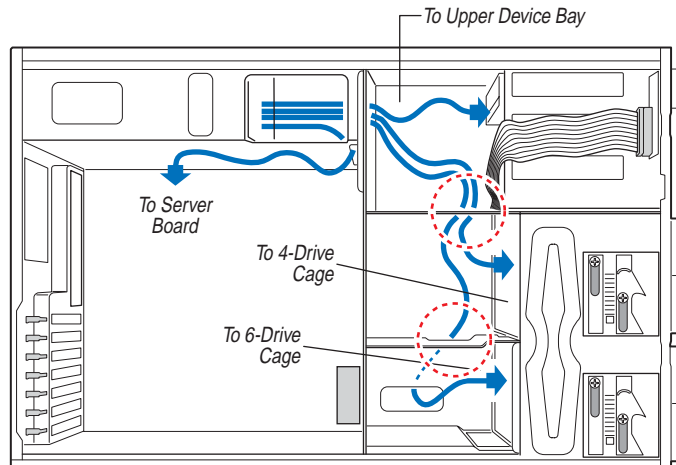
TP00525

Figure 12. Removing PCI Add-in Card Retainer

2. Route longest power cables to the 6-drive bay and shorter cables to the 4-drive bay and upper device bay.

Power Cable Routing Guidelines:

- P3, P4 and P5 power cables route to removable drives.
- P6, P7, P8, P9, P10 and P11 power cables (standard SCSI/IDE); route as appropriate.
- P12 and P13 power cables (SATA); route as appropriate.



TP00528

Figure 13. Routing Power Cables to Fixed Drives

3. Route SCSI/SATA data cables through the chassis openings located near the bottom of the drive cage. Connect data cables to the respective fixed drive and to the appropriate connector on the server board.

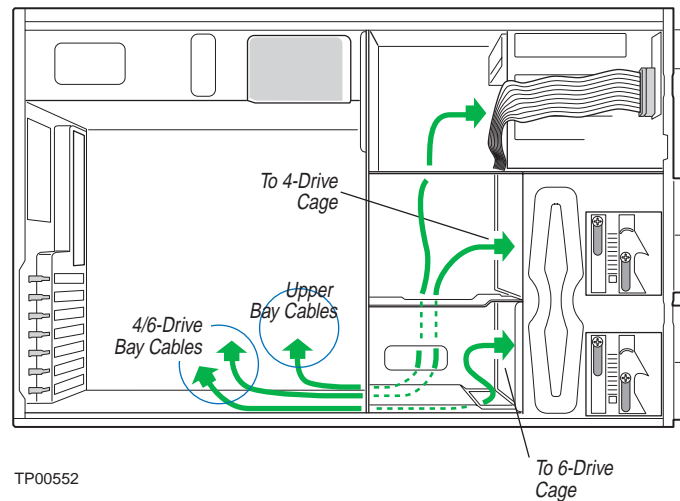


Figure 14. Routing SCSI/SATA Data Cables

Install 3.5-inch Floppy Drive

1. Press pair of slides inward (letter “A”) to release and pull slide/filler panel assembly out of upper device bay. Remove EMI panel from bracket (letter “B”).

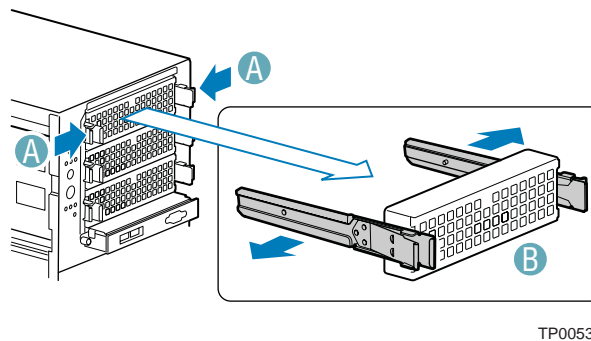
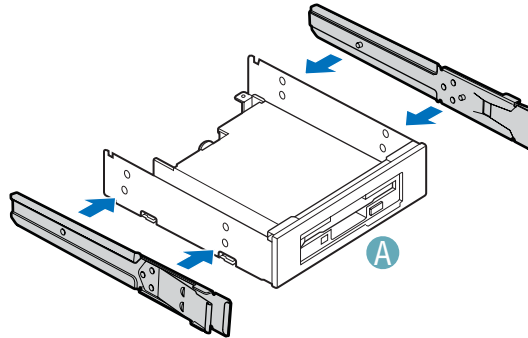


Figure 15. Removing Slide/Filler Panel Assembly from Upper Device Bay

2. Use a flat blade screwdriver to remove the knock-out insert from the front of tray.

3. Attach floppy drive to floppy drive tray with screws, using holes marked “FDD.”
4. Attach black plastic bezel to front of floppy drive tray (letter “A”). Remove slides from hard drive position and attach slides to floppy drive tray by pressing the slides firmly into the side dimples of the tray.



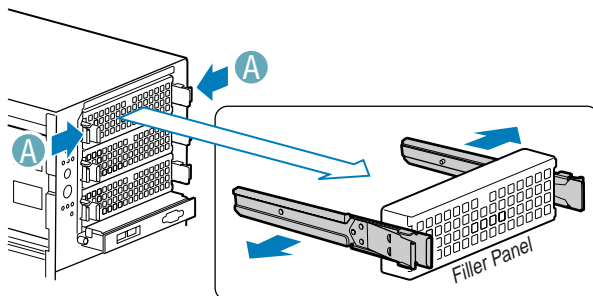
TP00538

Figure 16. Installing Slides on 3.5-in Floppy Drive

5. Insert the floppy drive/slide assembly partially into the upper device bay. Connect power and data cables.
6. Finish inserting the floppy drive/slide assembly into the chassis until the slides lock into place.

Install DVD or CD-ROM Drive.

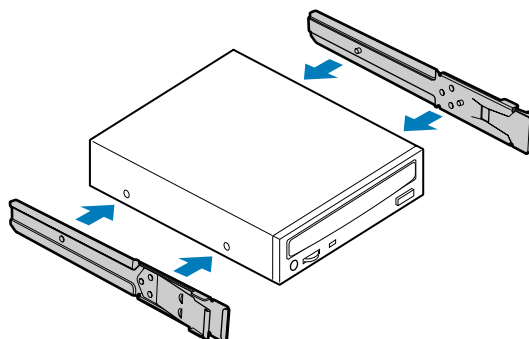
1. Remove a filler panel/slide assembly from the upper device bay.



TP00535

Figure 17. Removing Slide/Filler Panel Assembly from Upper Device Bay

2. Attach slides to the DVD or CD-ROM drive by pressing the slides firmly into the side dimples on the DVD or CD-ROM drive.



TP00536

Figure 18. Installing a DVD or CD-ROM Drive

3. Insert the drive/slide assembly into the upper device bay until the slides lock into place.
4. Connect power and data cables.

Install Fixed Hard Drive(s)

1. Push the blue plastic release mechanism upward to release the Fixed drive cage (letter “A”). Pull out the drive cage so that it is partially exposed (about 2 inches out) from the drive bay slot in the chassis (letter “B”). Partially exposing the drive cage will make it easier to open the upper door of the drive cage.

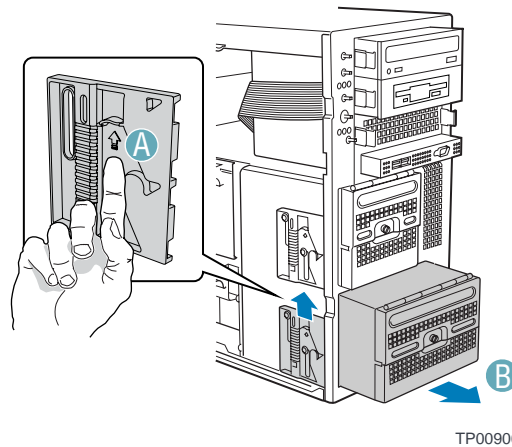


Figure 19. Removing Six-drive Fixed Drive Cage from Chassis

⇒ NOTE

As an alternative, you may also fully remove the drive cage from its drive bay slot in the chassis. Take care, however, to position the drive cage horizontally before opening the drive cage doors or the drive rails will spill out.

2. Loosen the captive screw (letter “A”). Open the upper door (letter “B”).

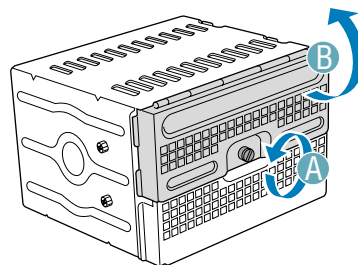
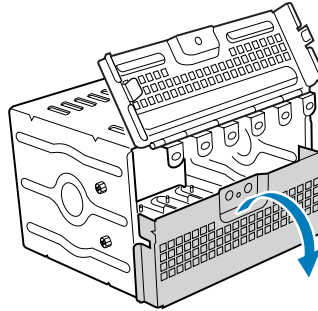


Figure 20. Unlocking and Opening Upper Drive Cage Door

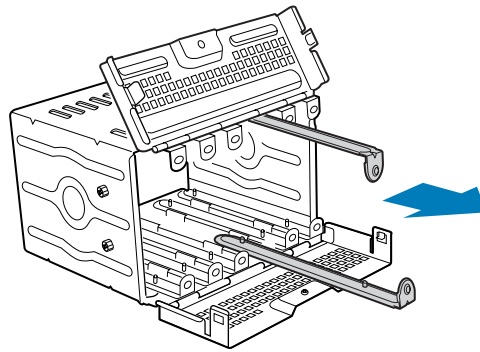
3. Open the lower door.



TP00920

Figure 21. Opening Lower Drive Cage Door

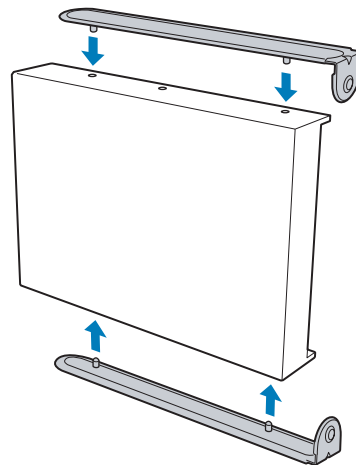
4. Remove a pair of device slides from the drive cage.



TP00563

Figure 22. Remove Slides from Drive Cage Door

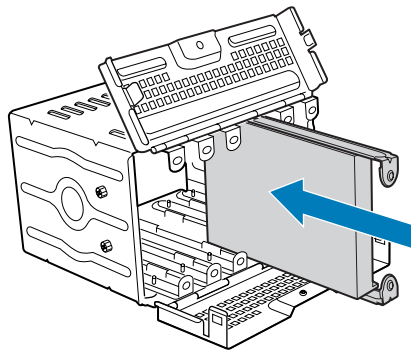
5. Attach the device slides to the hard drive. This is a tool-less operation. Insert tabs on device slides into mounting holes on hard drive and then press firmly to secure device slides to hard drive. Ensure that the metal tabs on the device slides are facing the front of the hard drive and facing towards each other.



TP00921

Figure 23. Installing Device Slides to Hard Drive

6. Insert drive/slide assembly into drive cage. Make sure that the cable connector end of the hard drive faces towards the rear of the drive cage. The top of the drive is in the same orientation as the arrow in the following illustration.



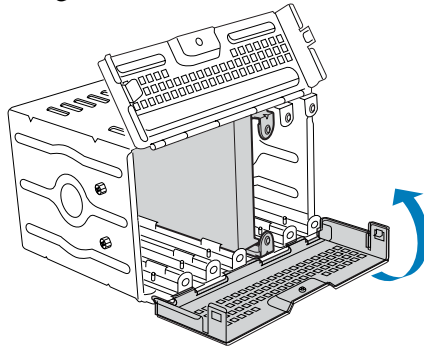
TP00923

Figure 24. Inserting Drive/Slide Assembly into Drive Cage

7. Repeat steps 4-5 for installation of additional hard drives into drive cage.

Setting Up the Chassis

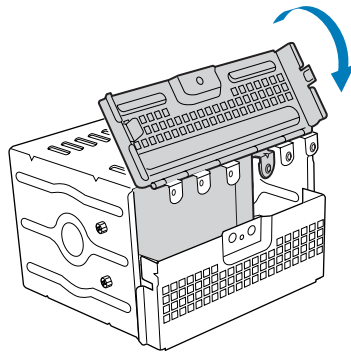
8. Close the lower door of drive cage.



TP00548

Figure 25. Closing Lower Door of Fixed Drive Cage

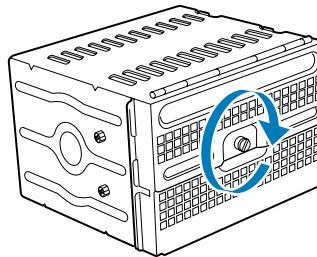
9. Close the upper door of drive cage.



TP00550

Figure 26. Closing Upper Door of Fixed Drive Cage

10. Tighten the thumb screw. Install power and data cables to connectors on hard drive(s).

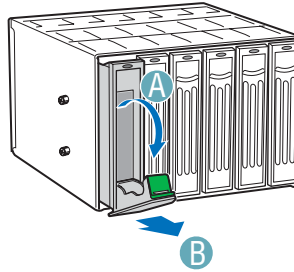


TP00551

Figure 27. Tightening Thumb Screw

Install Hot Swap Drive(s)

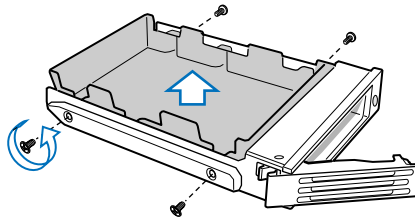
1. Press in on the green latch (letter “A”) at the end of the drive carrier to disengage it from the hot swap drive cage. Pull out on the black lever (letter “B”) to fully open the drive carrier. When the lever reaches a fully opened position, it will push the drive carrier out from the hot swap drive cage.



TP00918

Figure 28. Releasing Drive Carrier from Hot Swap Cage

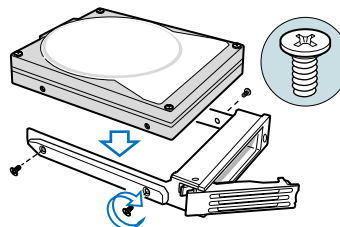
2. Slide the drive carrier out of the drive cage.
3. Remove the four screws that secure the plastic retention device to the drive carrier. Remove the plastic retention device.



TP00928

Figure 29. Removing Plastic Retention Device

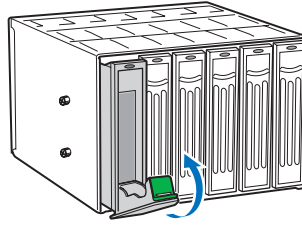
4. Secure the hard drive to the drive carrier using the four screws that were formerly attached to the plastic retention device. Ensure that the connector end of the hard drive is facing the back of the drive carrier. The label side of the hard drive should be facing up in the drive carrier.



TP00929

Figure 30. Securing Hard Drive to Drive Cage

5. With the black lever open, insert the drive carrier into the drive cage. Once inserted, rotate the black lever upwards to latch the drive carrier into position.



TP00930

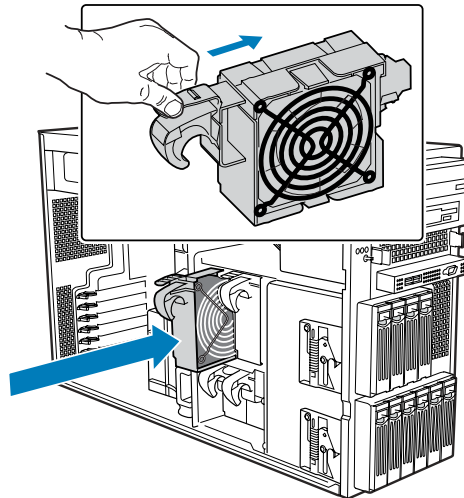
Figure 31. Inserting Drive Carrier into Drive Cage

Install Hot Swap Fans

⇒ **NOTE**

This step only applies to the Server Chassis SC5300LX configuration. The Server Chassis SC5300BASE and Server Chassis SC5300BRP configurations ship with fixed fans.

1. Insert Hot Swap Fans into chassis.



TP00995

Figure 32. Installing a Hot Swap Fan

Install Server Board

See your Intel® Server Board *Quick Start User's Guide* for server board installation instructions and installation of the back panel I/O shield. Use the mounting screws, bumpers and standoffs (if necessary) that came with your chassis to secure the server board to the chassis. Make sure the server board is properly seated and then tighten the screws firmly, starting with the screws at the center of the server board.

Install Air Dam

NOTE

This step only applies if an Intel® Server Board SE73020SP2 or Intel® Server Board SE7525GP2 is to be installed in the chassis.

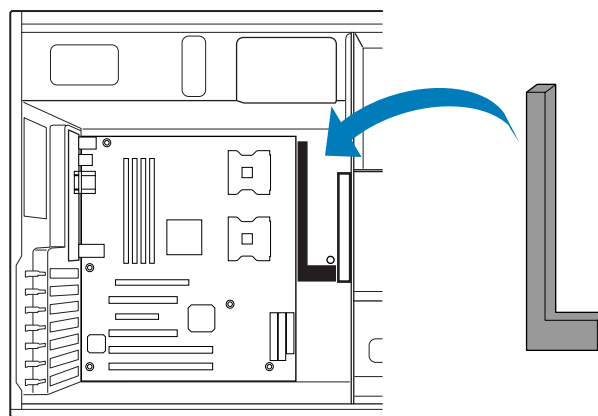
1. Remove adhesive strip from back of Air Dam.



TP00547

Figure 33. Removing Adhesive from Air Dam

2. Place Air Dam into position (as shown in the following figure) with adhesive side making contact with chassis. Press down firmly on Air Dam to secure it in chassis.



TP00549

Figure 34. Installing Air Dam

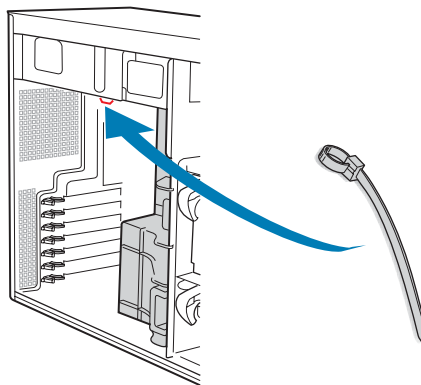
Connect Cables to Server Board

1. See your Intel® Server Board *User Guide* or *Quick Start User's Guide* for cable connection locations.

⇒ **NOTE**

Use caution in routing cables to ensure that cables do not obstruct airflow from the fans.

2. If your server has a hot swap power supply, secure the cables (that route toward the server board) to the chassis using the tie wrap that came in the supply bag that shipped with your chassis.



TP00539

Figure 35. Securing Cables in Chassis with a Hot Swap Power Supply

Install Add-in Board(s)

You may want to install an operating system before installing any add-in boards.



CAUTIONS

Do not overload the server board by installing add-in boards that draw excessive current.

Add-in boards can be extremely sensitive to ESD and always require careful handling. After removing the board from its protective wrapper or from the server board, place it component side up on a grounded, static-free surface or conductive foam pad if available. Do not slide the board over any surface.

NOTE

When removing a full-length add-in card, you must pull back on the latch on the plastic card guide at the front of the chassis to release the card from the card guide.

1. Press on two plastic tabs (letter “A”) and remove PCI Add-in Card Retainer, if not removed in a previous step.

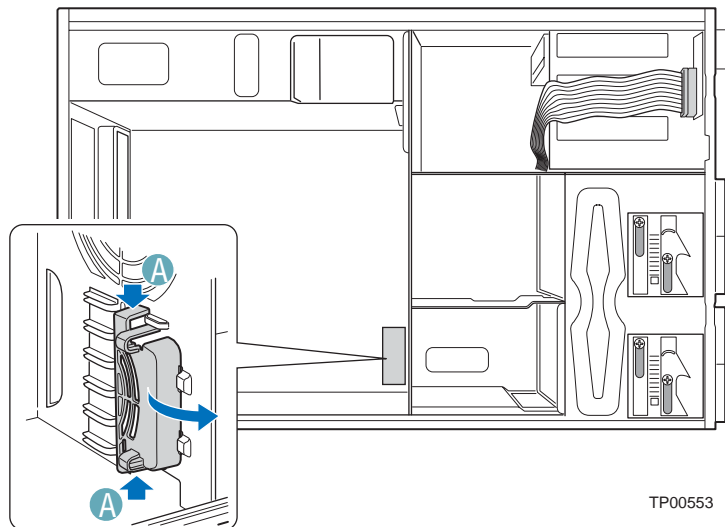


Figure 36. Remove PCI Add-in Card Retainer

Setting Up the Chassis

2. Open back panel PCI Add-In Card Retention Device (letter “A”) by pressing open from the inside of the chassis. Remove the PCI slot shield (letter “B”) by pushing shield out from the inside of the chassis.

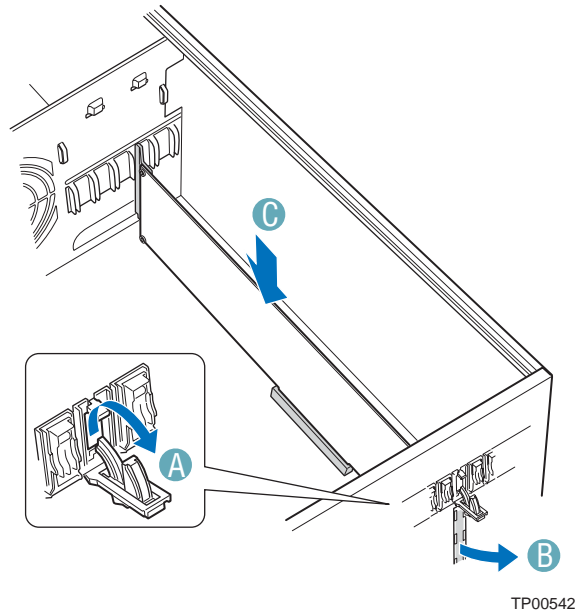
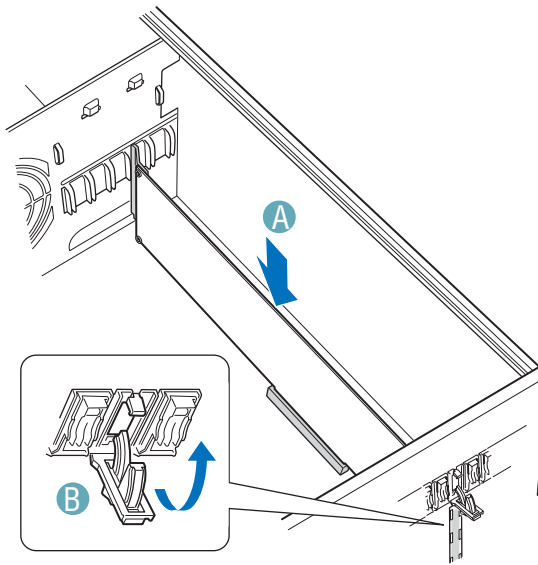


Figure 37. Preparing the Chassis for a PCI Add-in Board

3. Remove a PCI add-in board from its protective wrapper. Be careful not to touch the components or gold edge connectors. Place board on anti-static surface. Record the type and serial number of the add-in board in your equipment log. Set jumpers or switches on the board according to manufacturer’s instructions.

4. Hold PCI add-in board by its top edge or upper corners. Firmly press board into an expansion slot on the server board (letter "A"). Close back panel PCI Add-in Card Retention Device (letter "B").

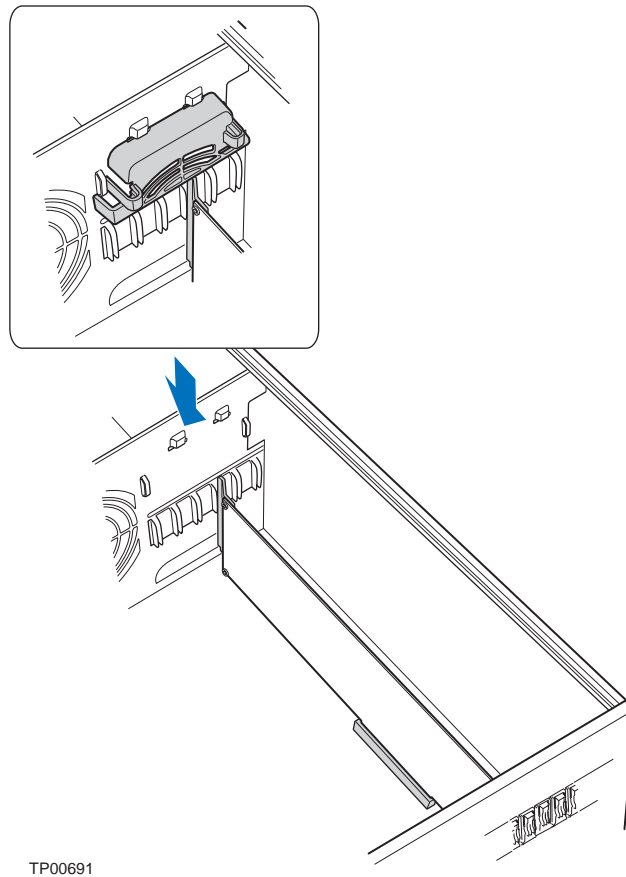


TP00555

Figure 38. Installing an Add-in Board

5. Repeat Step 4 until all PCI add-in cards are installed.

6. Reinstall the PCI Add-in Card Retainer.



TP00691

Figure 39. Replacing PCI Add-in Card Retainer

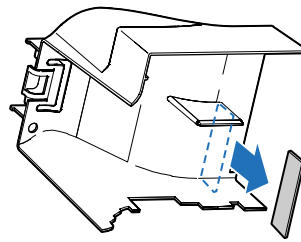
7. Attach cables if necessary.

Install Air Ducts

1. If your system has two processors, remove the inner plastic air baffle from the inside of the Processor Air Duct.

⇒ NOTE

This step only applies to systems with two processors. If your server board has only one processor installed, leave the inner air baffle in place and proceed to Step 2.



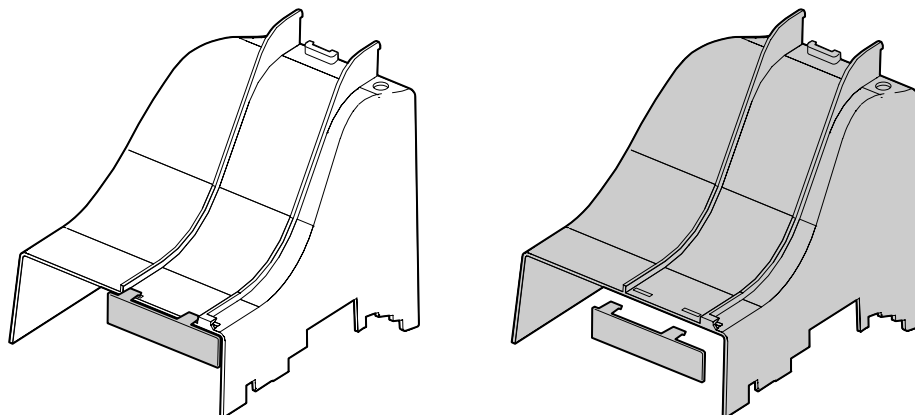
TP00545

Figure 40. Removing Inner Plastic Air Baffle from Processor Air Duct

2. If you are installing an Intel® Server Board SE7320SP2 or SE7525GP2, remove the outer plastic air baffle.

⇒ NOTE

Leave the outer air baffle in place if you are installing an Intel® Server Board SE7520BD2 or SE7520AF2.



TP00700

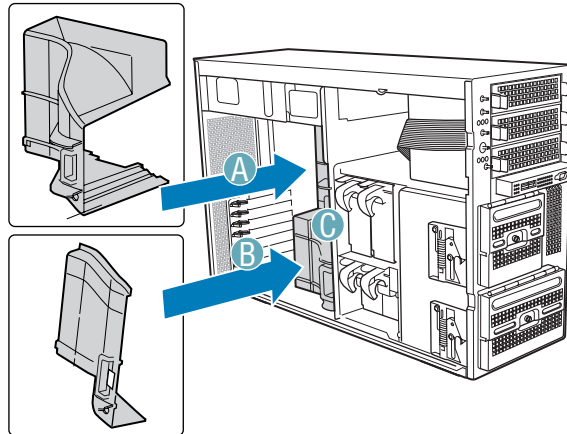
Figure 41. Removing Outer Plastic Air Baffle from Processor Air Duct

Setting Up the Chassis

3. Install Processor Air Duct into chassis (letter “A”). Install PCI Air Duct (letter “B”) and latch (letter “C”) into place.

⇒ NOTE

The Processor Air Duct interlocks with the PCI Air Duct in two places before latching into place.



TP00562

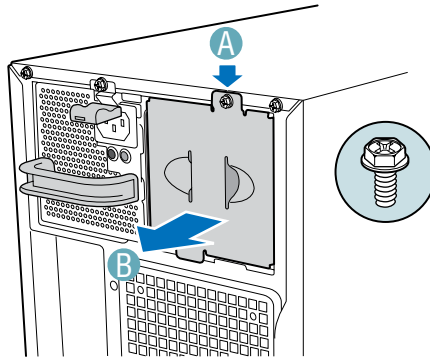
Figure 42. Installing Air Ducts

Install an Additional Hot Swap Power Supply Module

⇒ NOTE

This step only applies to chassis with redundant power supply capability. Do not perform this step if your chassis has a fixed power supply.

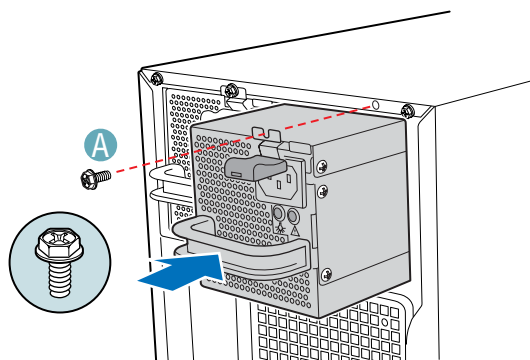
1. Loosen screw (letter “A”) and remove power supply filler pane (letter “B”).



TP00543

Figure 43. Removing Power Supply Filler Panel

2. Insert power supply module until it clicks into place. Secure with screw (letter “A”) if shipping chassis to another location



TP00544

Figure 44. Installing Additional Hot Swap Power Supply Module

Install Bezel Assembly (Pedestal Only)

⇒ NOTE

This step applies to a pedestal configured chassis only. For instructions on installing a bezel in a rack configuration, refer to the Rack Conversion Kit Installation Guide: Intel® Server Chassis SC5300.

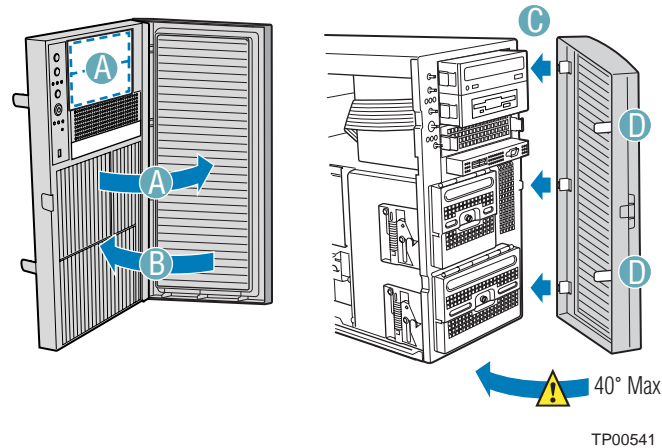


Figure 45. Installing Bezel Assembly

1. Open the Outer Bezel Door of the Bezel Assembly (letter “A”) and remove filler panels that correspond to installed devices.
2. Close the Outer Bezel Door (letter “B”).
3. Fit the right edge of the Bezel Assembly against the right side of chassis and engage plastic bezel hooks (letter “C”) into raised metal slots at chassis edge.
4. Rotate Bezel Assembly toward chassis and latch the two plastic tabs (letter “D”) on left side of Bezel Assembly to chassis.

Install Primary Access Cover

1. Slide Primary Access Cover on chassis.
2. Latch securely to the chassis.
3. If the chassis will be re-shipped, insert the shipping screw (label 'A').

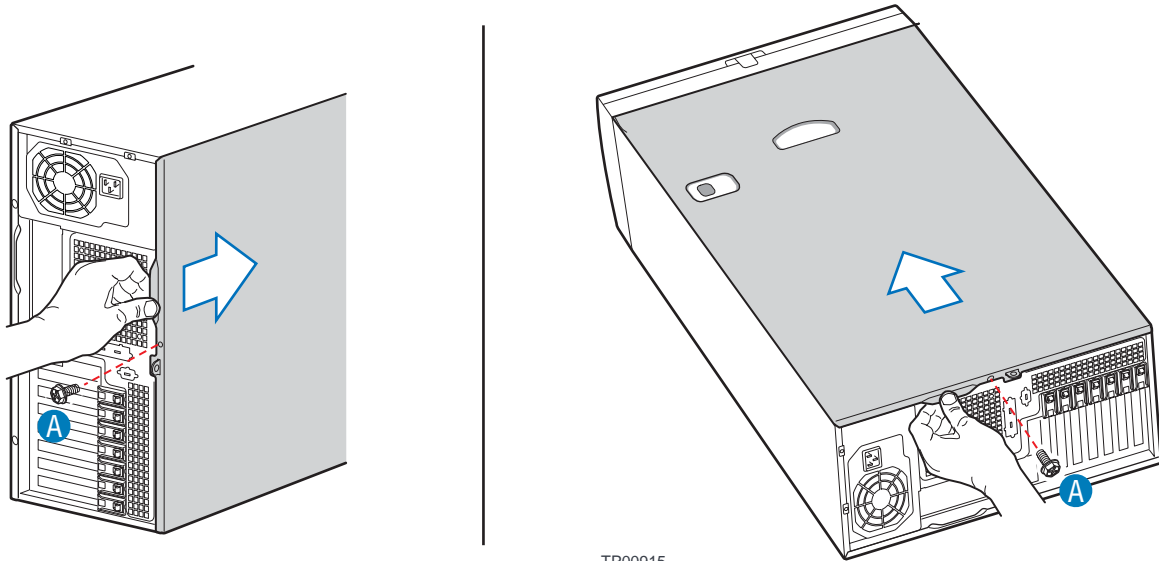


Figure 46. Installing the Access Cover

3. Maintaining Your Server

This chapter describes how to replace components in your server after it has been set up.

Tools and Supplies Needed

- Phillips (cross head) screwdriver (#2 bit)
- Antistatic wrist strap (recommended)
- Needle-nosed pliers

Safety: Before You Remove the Access Cover(s)

Before removing the Access Cover(s) for any reason, observe these safety guidelines:

1. Turn off all peripheral devices connected to the server.
2. Turn off the server by pressing the power button on the front of the chassis.
3. Unplug the AC power cord from the chassis or wall outlet.
4. Label and disconnect all peripheral cables and all telecommunication lines connected to I/O connectors or ports on the back of the chassis.
5. Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—when handling components.

Warnings and Cautions

These warnings and cautions apply whenever you remove the access cover(s) to access components inside the server. Only a technically qualified person should integrate and configure the server.



WARNINGS

The power button on the front panel DOES NOT turn off the AC power. To remove power from server, you must unplug the AC power cord from the wall outlet or the chassis.

Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cords, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.

Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.



CAUTIONS

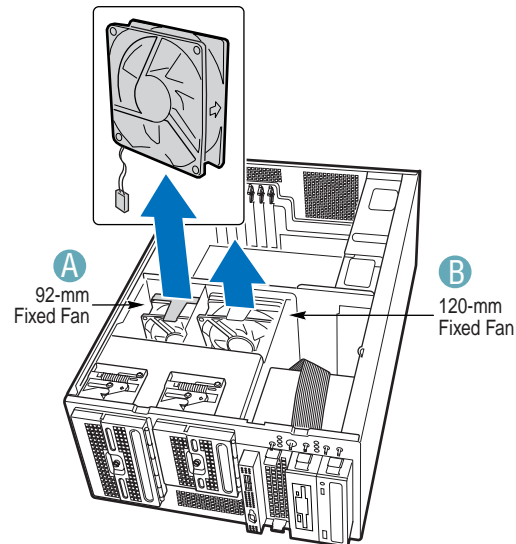
ESD can damage disk drives, boards, and other parts. Perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—on your server when handling parts.

Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. Do not touch the connector contacts. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. If you place the server board on a conductive surface, the battery leads may short out. If they do, this will result in a loss of CMOS data and will drain the battery. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

For proper cooling and airflow, always install the access cover before turning on the server. Operating the server without the cover in place can damage system parts.

Replacing a Fixed Fan (For Base and BRP Chassis Only)

1. Remove Primary Access Cover (see “Remove Primary Access Cover” in Chapter 2 for step-by-step instructions).
2. Disconnect fan power cable from server board.
3. Remove the 92-mm (letter “A”) or 120-mm (letter “B”) Fixed Fan from its snap-in bracket.



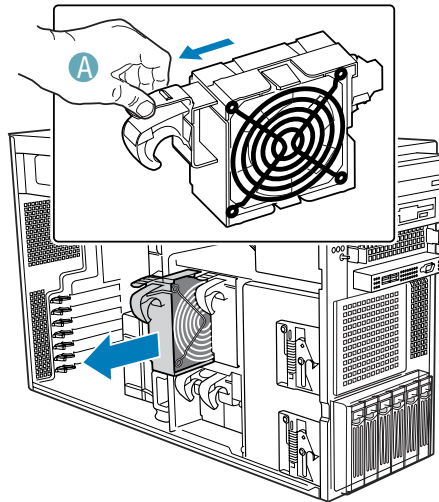
TP00991

Figure 47. Removing a Fixed Fan

4. Install new 92-mm or 120-mm Fixed Fan.
5. Reconnect fan cable to server board.
6. Replace Primary Access Cover (see “Install Primary Access Cover” in Chapter 2 for step-by-step instructions).

Replacing a Hot Swap Fan

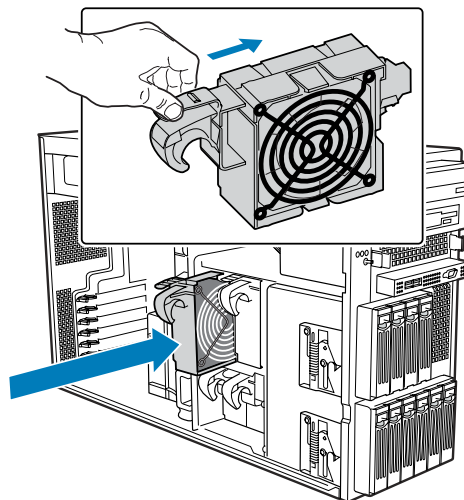
1. Remove Primary Access Cover (see “Remove Primary Access Cover” in Chapter 2 for step-by-step instructions).
2. Press latch (letter “A”) on fan and pull on handle to remove Hot Swap Fan from chassis.



TP00908

Figure 48. Removing a Hot Swap Fan

3. Insert new Hot Swap Fan.



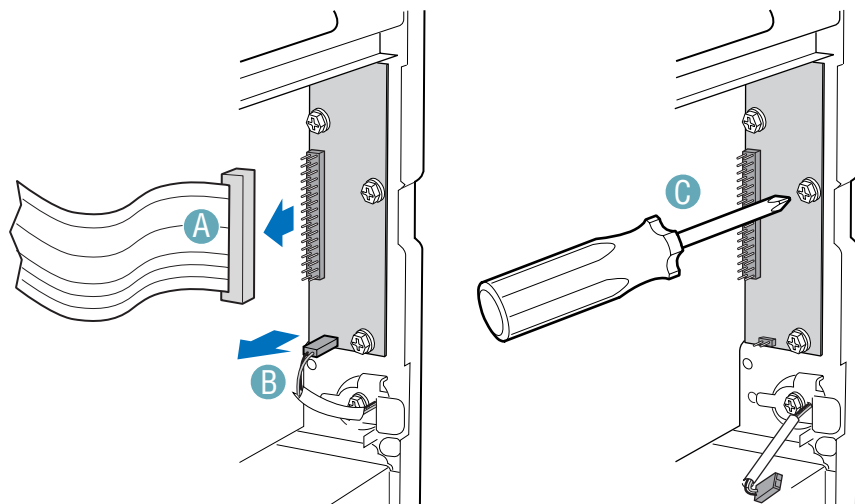
TP00995

Figure 49. Installing a Hot Swap Fan

4. Replace Primary Access Cover (see “Install Primary Access Cover” in Chapter 2 for step-by-step instructions).

Replacing the Front Panel Board

1. Remove the Primary Access Cover (see “Remove Primary Access Cover” in Chapter 2 for step-by-step instructions).
2. Remove the Bezel Assembly (see “Remove Bezel Assembly” in Chapter 2 for step-by-step instructions).
3. Disconnect the front panel cable (letter “A”) from the Front Panel Board. Disconnect the optical switch (letter “B”) if connected. If jumper is installed for a rack-mount system, remove jumper and save it. Remove and save the three screws (letter “C”) holding the front panel board to the chassis. Carefully remove the Front Panel Board.



TP00690

Figure 50. Removing the Front Panel Board

4. Attach front panel cable (letter “A”) before installing the new Front Panel Board into the chassis to ensure the cable pins line up correctly. Place the new Front Panel Board in the chassis. Insert and tighten the three screws (letter “B”) removed earlier. Connect the optical switch cable (letter “C”) or, for rack-mount systems, reinstall the previously saved jumper.

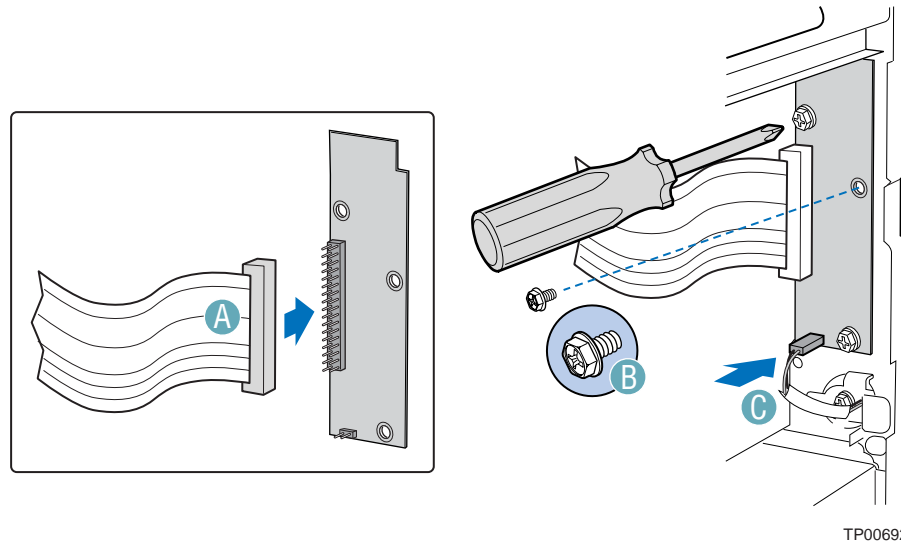


Figure 51. Installing the Front Panel Board

5. Replace the Bezel Assembly (see “Install Bezel Assembly” in Chapter 2 for step-by-step instructions).
6. Replace the Primary Access Cover (see “Install Primary Access Cover” in Chapter 2 for step-by-step instructions).

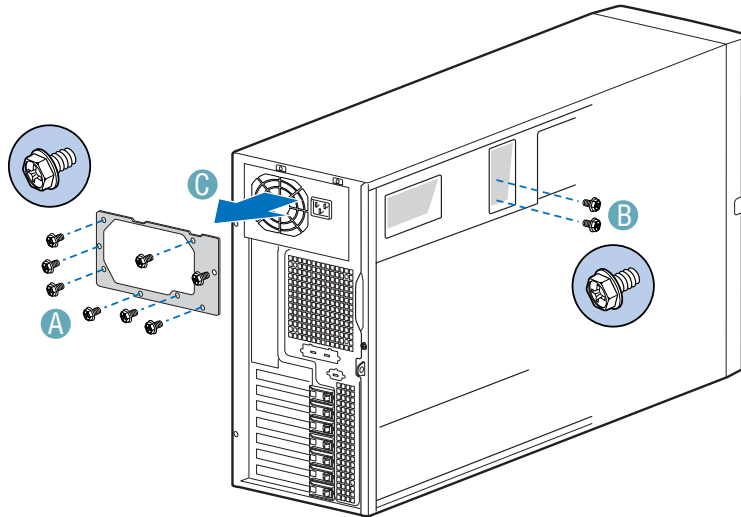
Replacing a Fixed Power Supply

WARNINGS

Hazardous conditions, power supply: Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.

1. Disconnect all power cables from chassis after shutting down the server.
2. Remove the Primary Access Cover (see “Remove Primary Access Cover” in Chapter 2 for step-by-step instructions).
3. Disconnect all internal power cables from chassis components and server board.

4. Remove the eight screws holding the Fixed Power Supply shield in place (letter “A”). Remove the two screws holding the Fixed Power Supply inside the power supply bay (letter “B”). Remove the Fixed Power Supply (letter “C”).



TP00694

Figure 52. Removing Fixed Power Supply

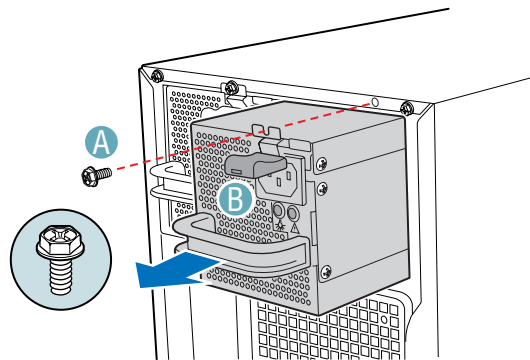
5. Insert new Fixed Power Supply.
6. Secure Fixed Power Supply inside power supply bay with two screws.
7. Secure Fixed Power Supply shield to chassis with eight screws.
8. Route the P1, P2 and P14 cables to the server board.
9. Connect the power cables to the server board, Refer to the Intel® Server Board *Quick Start User's Guide* or *User Guide* for appropriate power connections.
10. Replace Primary Access Cover (see “Install Primary Access Cover” in Chapter 2 for step-by-step instructions).
11. Connect power to the Fixed Power Supply.

Replacing a Hot Swap Power Supply

WARNINGS

Hazardous conditions, power supply: Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.

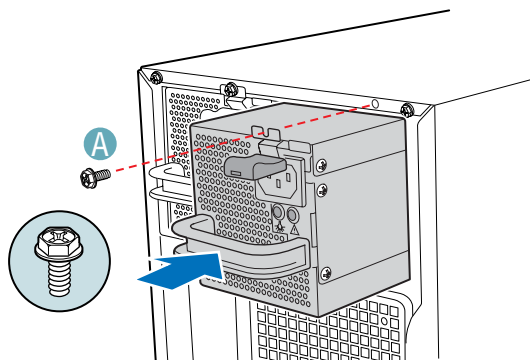
1. Remove power cable from defective power supply.
2. Remove shipping screw (letter “A”) securing Hot Swap Power Supply to chassis, if necessary. Press on green latch (letter “A”) while pulling on handle to remove Hot Swap Power Supply from chassis.



TP00558

Figure 53. Removing a Hot Swap Power Supply

3. Insert new Hot Swap Power Supply. Replace shipping screw (letter “A”) if shipping chassis to another location.



TP00544

Figure 54. Installing a Hot Swap Power Supply

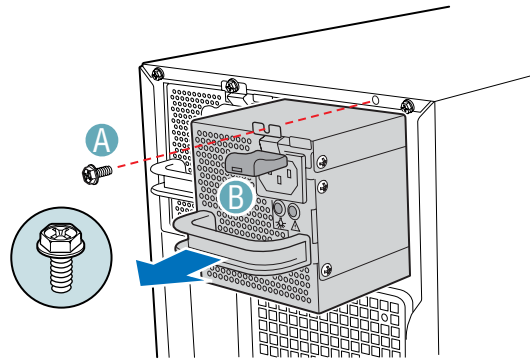
4. Connect power cable to replaced power supply.

Replacing a Power Distribution Board

WARNINGS

Hazardous conditions, power supply: Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.

1. Disconnect power to the chassis after shutting down the server.
2. Remove the Primary Access Cover (see “Remove Primary Access Cover” in Chapter 2 for step-by-step instructions).
3. Remove the Air Ducts (see “Remove Air Ducts” in Chapter 2 for step-by-step instructions).
4. Remove shipping screw (letter “A”) securing Hot Swap Power Supply to chassis, if necessary. Press on green latch (letter “A”) while pulling on handle to remove Hot Swap Power Supply from chassis. Repeat this step for second Hot Swap Power Supply if one is installed.

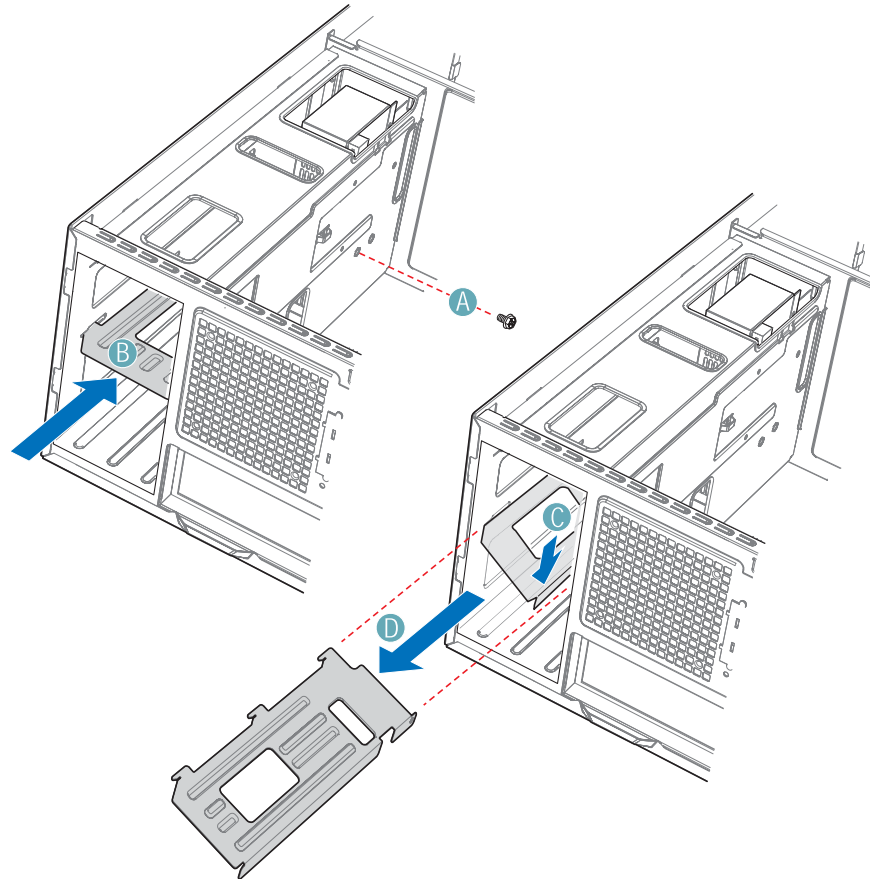


TP00558

Figure 55. Removing Hot Swap Power Supply

5. Disconnect all internal power cables from chassis components and server board.

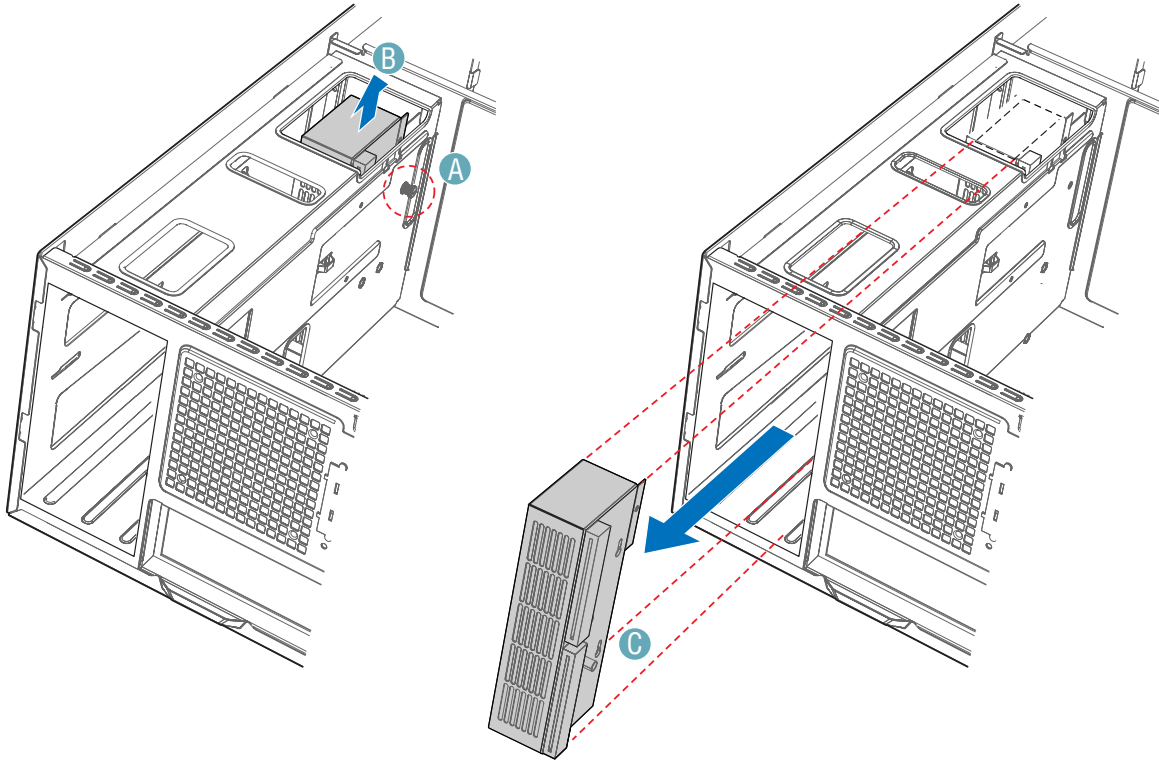
6. Remove screw (letter “A”) securing center divider to power supply cage. Push center divider straight back (letter “B”) to release tabs from chassis slots. Then, while holding the right edge of the center divider at a downward angle, disengage tabs from chassis wall by pushing center divider up and sideways (letter “C”). Remove center divider from power supply cage (letter “D”).



TP00696

Figure 56. Removing Center Divider

7. Loosen thumb screw (letter “A”) securing Power Distribution Board to chassis. Lift Power Distribution Board off of standoffs (letter “B”) and then remove through back of power supply cage. You may have to feed the power cables through the power supply cage while removing the Power Distribution Board.

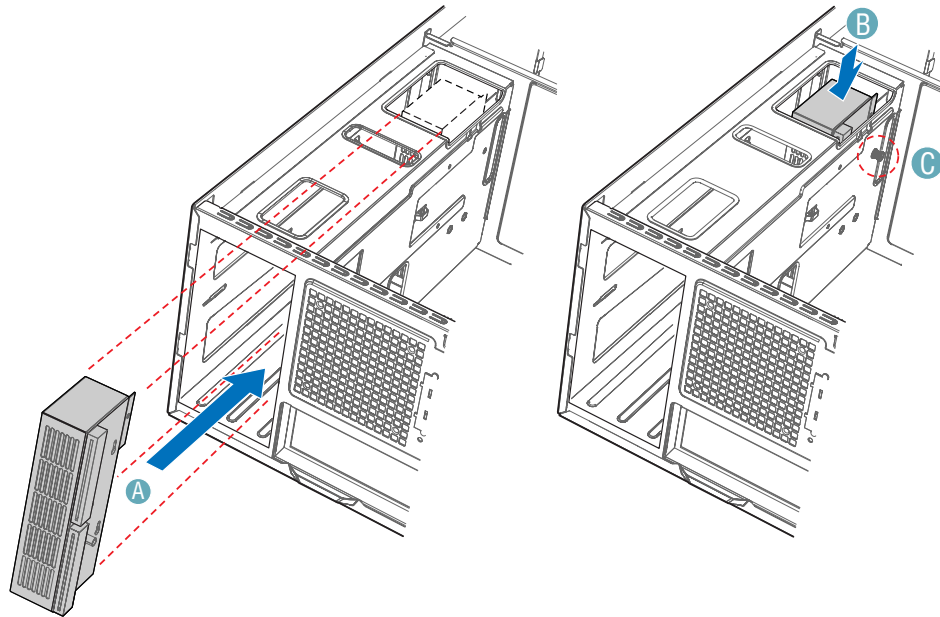


TP00698

Note: Cables on back of Power Distribution Board not shown to clarify removal process.

Figure 57. Removing Power Distribution Board

8. Insert new Power Distribution Board into power supply cage (letter “A”). Try to route the power cables to the appropriate area at the time of insertion (see Steps 9 and 10 below). Position the Power Distribution Board on the four standoffs inside the power supply cage. Push down on the Power Distribution Board to securely attach it to the standoffs (letter “B”). Tighten thumb screw (letter “C”).



TP00693

Note: Cables on back of Power Distribution Board not shown to clarify insertion process.

Figure 58. Securing Power Distribution Board to Power Supply Cage

9. Route the P1, P2, and P14 power cables to the server board and connect to appropriate connectors. Refer to the Intel® Server Board *Quick Start User's Guide* or *User Guide* for the location of power connectors.
10. Route the longest power cables (P8, P9, P10, and P11) to the six-drive bay and connect power cables to any installed devices. Route the shorter cables (P3, P4, and P5) to the upper device bay and connect to any installed devices. Route the P6 and P7 cables to the four-drive bay and connect to any installed devices. Route the SATA drive power cables to whichever drive bay is using SATA fixed drives.

11. Reinstall center divider and secure to chassis with one screw.

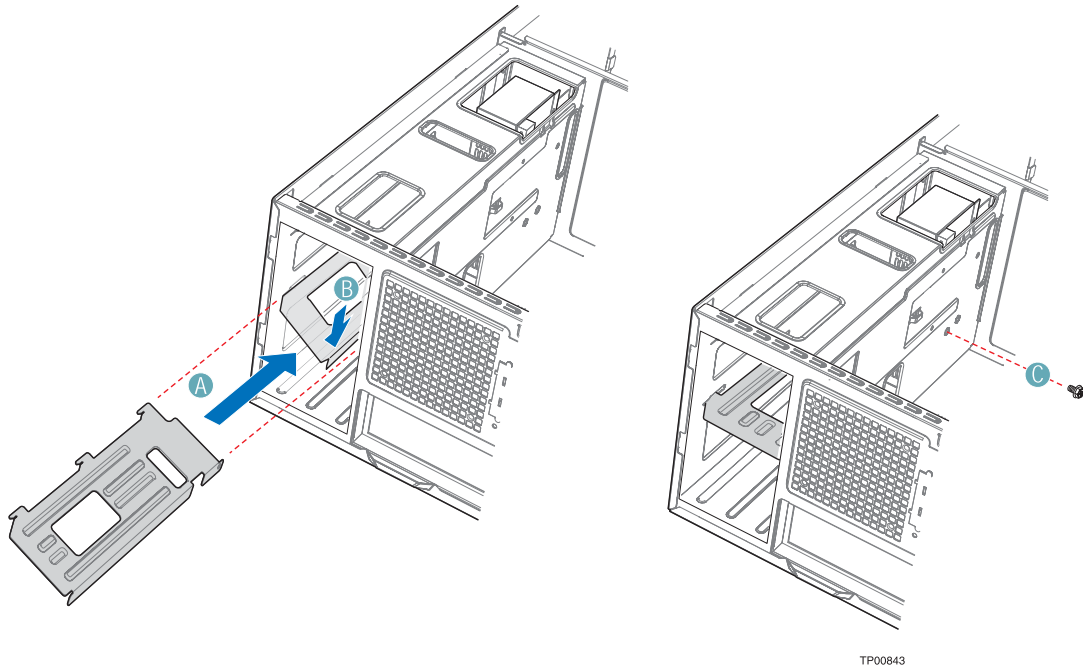


Figure 59. Reinstalling Center Divider

12. Reinstall Hot Swap Power Supply(ies). Reinstall screw (letter “A”) if shipping chassis to another location.

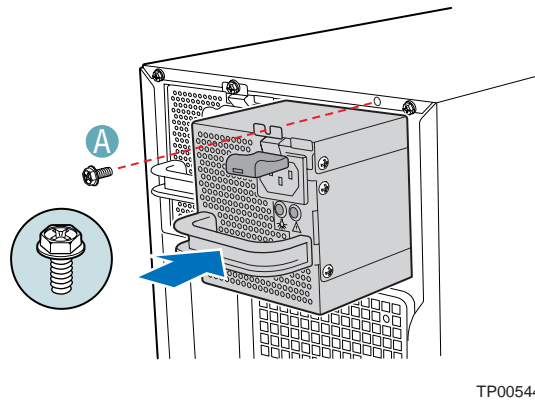


Figure 60. Reinstalling Hot Swap Power Supply

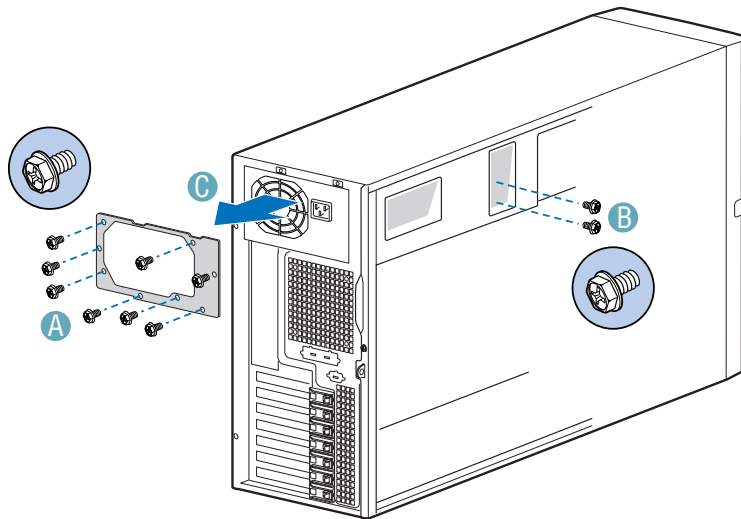
13. Reinstall the Air Ducts (see “Install Air Ducts” in Chapter 2 for step-by-step instructions).
14. Replace the Primary Access Cover (see “Install Primary Access Cover” in Chapter 2 for step-by-step instructions).
15. Connect power to chassis.

Upgrading from a Fixed Power Supply to a Hot Swap Power Supply

WARNINGS

Hazardous conditions, power supply: Hazardous voltage, current, and energy levels are present inside the power supply. There are no user-serviceable parts inside it; servicing should be done by technically qualified personnel.

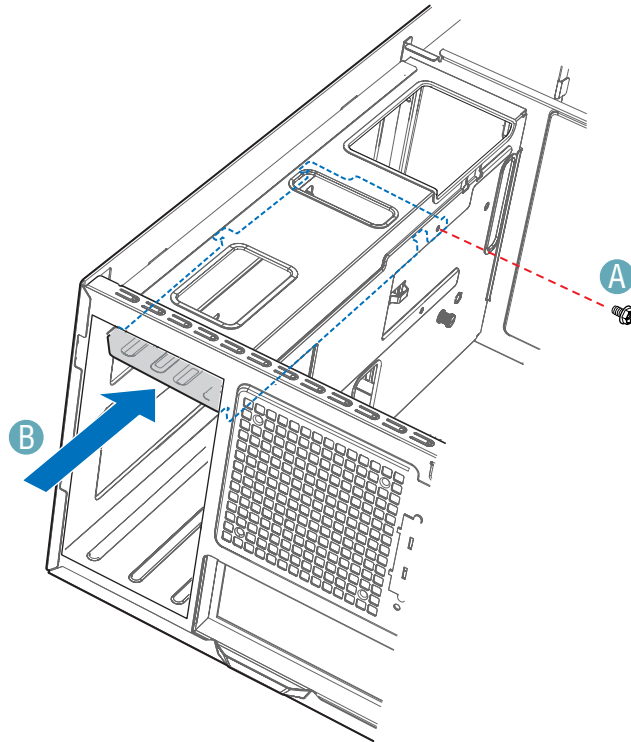
1. Disconnect power to the chassis after shutting down the server.
2. Remove the Primary Access Cover (see “Remove Primary Access Cover” in Chapter 2 for step-by-step instructions).
3. Remove the Air Ducts (see “Remove Air Ducts” in Chapter 2 for step-by-step instructions).
4. Disconnect all internal power cables from chassis components and server board.
5. Remove the eight screws holding the Fixed Power Supply shield in place (letter “A”). Remove the two screws holding the Fixed Power Supply inside the power supply bay (letter “B”). Remove the Fixed Power Supply (letter “C”).



TP00694

Figure 61. Removing Fixed Power Supply

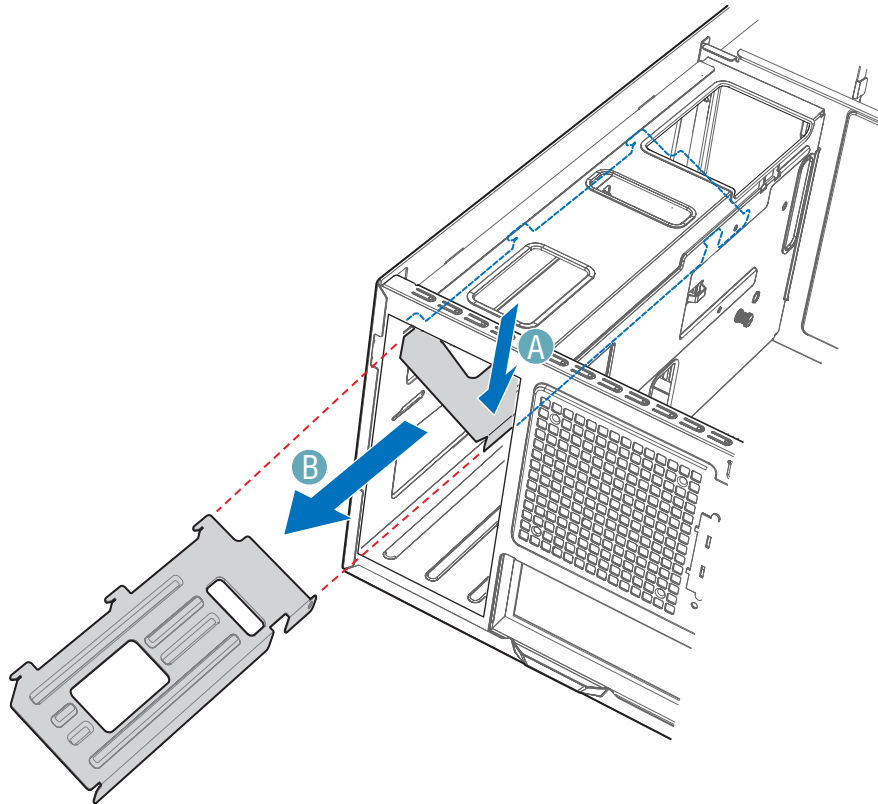
6. Remove the screw (letter “A”) securing the center divider to the power supply cage. Push the center divider straight back (letter “B”) to release tabs from chassis slots.



TP01998

Figure 62. Releasing Center Divider from Power Supply Cage

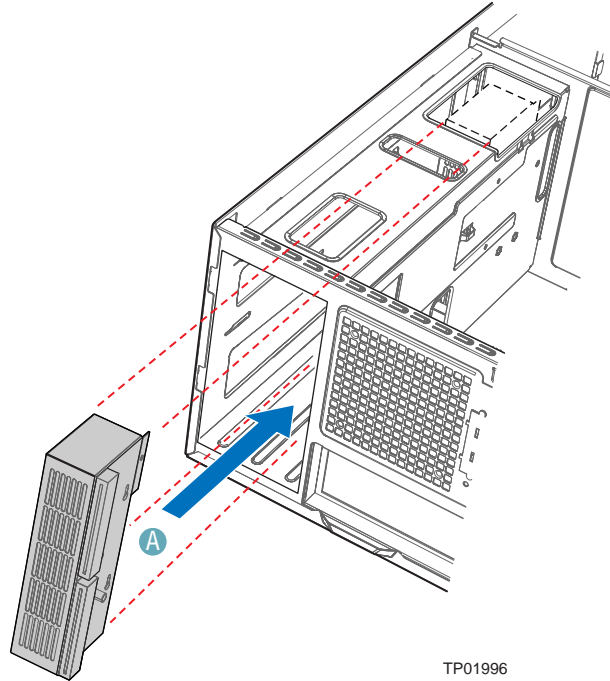
7. While holding the right edge of the center divider at a downward angle (letter “A”), disengage the tabs from the chassis wall by rotating the center divider out of the slots. Remove center divider from the power supply cage (letter “B”).



TP01999

Figure 63. Removing Center Divider from Power Supply Cage

8. Insert the new Power Distribution Board into the power supply cage (letter “A”). Try to route the power cables to the appropriate area at the time of insertion (see Steps 9 and 10). Do not secure the Power Distribution Board yet.



Note: Cables on back of Power Distribution Board not shown to clarify insertion process.

Figure 64. Inserting Power Distribution Board in Power Supply Cage

9. Route the P1, P2, and P14 power cables to the server board and connect to appropriate connectors. Refer to the Intel® Server Board *Quick Start User's Guide* or *User Guide* for the location of power connectors.
10. Route the longest power cables (P8, P9, P10, and P11) to the six-drive bay and connect power cables to any installed devices. Route the shorter cables (P3, P4, and P5) to the upper device bay and connect to any installed devices. Route the P6 and P7 cables to the four-drive bay and connect to any installed devices. Route the SATA drive power cables to which ever drive bay is using SATA fixed drives.

11. Reinstall the center divider into the middle position (letters “A” and “B”) and secure to chassis with one screw (letter “C”).

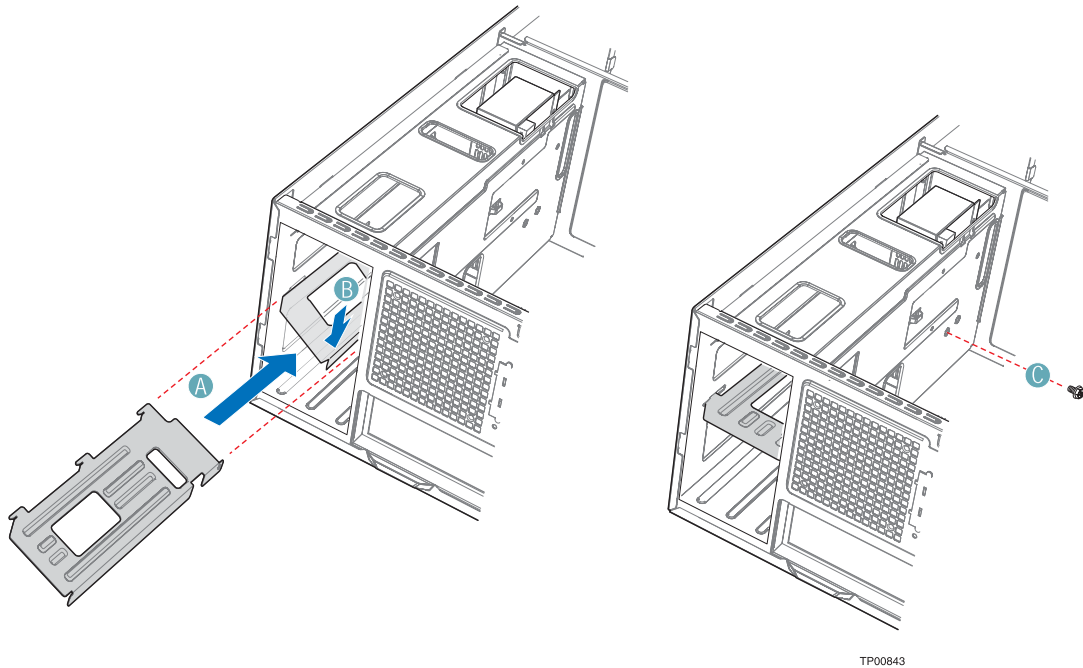


Figure 65. Reinstalling Center Divider

12. Position the Power Distribution Board on the four standoffs inside the power supply cage. Push down on the Power Distribution Board to securely attach it to the standoffs (letter “A”). Tighten the thumb screw (letter “B”).

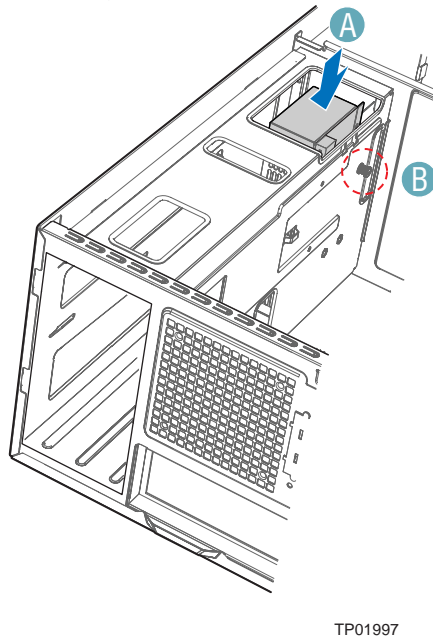
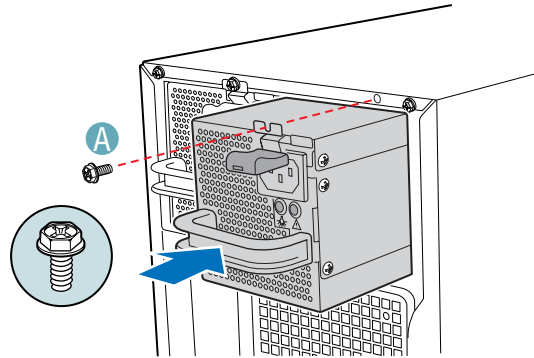


Figure 66. Securing Power Distribution Board to Power Supply Cage

13. Install the Hot Swap Power Supply. Install screw (letter “A”) if shipping chassis to another location.



TP00544

Figure 67. Reinstalling Hot Swap Power Supply

16. Reinstall the Air Ducts (see “Install Air Ducts” in Chapter 2 for step-by-step instructions).
17. Replace the Primary Access Cover (see “Install Primary Access Cover” in Chapter 2 for step-by-step instructions).
18. Connect power to chassis.

4. Technical Reference

Power Supply Specifications

600-W Single Power Supply Input Voltages

600-W Power Supply

- 100-127 V~ at 50/60 Hz; 10 A max.
- 200-240 V~ at 50/60 Hz; 5 A max.

600-W Single Power Supply Output Voltages

600-W Power Supply

The table below lists the total wattage available from the power subsystem for each voltage. If you configure your system heavily, ensure that your loads do not exceed the combined total wattage of 600 Watts. For information about calculating the power usage for your configuration, see page 64.

Table 4. 600-W Power Supply System Output Capability

Voltage	Maximum Current
+3.3 V	20 A
+5.0 V	24 A
+5 V Standby	2 A
+12.0	43 A
-12.0 V	0.5 A



CAUTION

Do not exceed a combined power output of 140 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 140 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

The expansion slots on the server board are rated for no more than 25 Watts for any one slot. The average current usage per slot should not exceed 13 Watts.

730-W Single Power Supply Input Voltages

730-W Power Supply

- 100-127 V~ at 50/60 Hz; 10 A max.
- 200-240 V~ at 50/60 Hz; 5 A max.

730-W Single Power Supply Output Voltages

730-W Power Supply

The table below lists the total wattage available from the power subsystem for each voltage. If you configure your system heavily, ensure that your loads do not exceed the combined total wattage of 730 Watts. For information about calculating the power usage for your configuration, see page 64.

Table 5. 730-W Power Supply System Output Capability

Voltage	Maximum Current
+3.3 V	24 A
+5.0 V	24 A
+5 V Standby	2 A
+12.0	48 A
-12.0 V	0.5 A



CAUTION

Do not exceed a combined power output of 140 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 140 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

The expansion slots on the server board are rated for no more than 25 Watts for any one slot. The average current usage per slot should not exceed 13 Watts.

System Environmental Specifications

Table 6. Environmental Specifications

Temperature Non-operating Operating	–40 ° to 70 °C. 5 ° to 35 °C; derated 0.5 °C for every 1000 ft (305 m) to a maximum of 10,000 ft.
Humidity Non-operating	90% relative humidity (non-condensing) at 30 °C.
Shock Operating Packaged	2.0 g, 11 msec, 1/2 sine Operational after an 18" free fall.
Acoustic noise	7 Bels in sound power for a typical office ambient temperature (65-75 °F). Your selection of peripherals may change the noise level.
Electrostatic discharge (ESD)	Tested to 15 kilovolts (kV); no component damage.

Equipment Log and Worksheets

Equipment Log

Use the blank equipment log provided here to record information about your server. You will need some of this information when you run the SSU.

Item	Manufacturer Name and Model Number	Serial Number	Date Installed
Chassis			
Server Board			
Processor Speed and Cache			
Memory			
Video Display			
Keyboard			
Mouse			
Diskette Drive A			
CD-ROM Drive			
Additional 5.25" Peripheral			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			
Hard Disk Drive			

continued

Equipment Log (continued)

Item	Manufacturer Name and Model Number	Serial Number	Date Installed
Intel® Management Module			
Local Control Panel			

Current Usage

Calculating Power Usage

The total combined wattage for your configuration **must be less than the wattage rating for your power supply**. Use the two worksheets in this section to calculate the total used by your configuration. For current and voltage requirements of add-in boards and peripherals, see your vendor documents.

Worksheet, Calculating DC Power Usage

Table 7. Power Usage Worksheet 1

Device	Current (maximum) at voltage level:					
	+3.3 V	+5 V	-5 V	+12 V	-12 V	5 V Standby
Baseboard, Front Panel Board and Fans						
Processor(s)						
Memory						
3.5-inch Diskette Drive						
CD-ROM Drive						
Second 5.25-inch Device						
Third 5.25-inch Device						
1st Hard Drive						
2nd Hard Drive						
3rd Hard Drive						
4th Hard Drive						
5th Hard Drive						
6th Hard Drive						
Expansion Board 1						
Expansion Board 2						
Expansion Board 3						
Expansion Board 4						
Expansion Board 5						
Expansion Board 6						
Intel® Management Module						
Local Control Panel						
Total Current						

Worksheet, Total Combined Power Used by the Server

1. From the previous worksheet, enter the total current for each column.
2. Multiply the voltage by the total current to get the total wattage for each voltage level.
3. Add the total wattage for each voltage level to arrive at the total combined power usage for the power subsystem.

Table 8. Power Usage Worksheet 2

Voltage level and total current (V X A = W)	Total Watts for each voltage level
(+3.3 V) X (_____ A)	_____ W
(+5 V) X (_____ A)	_____ W
(+12 V) X (_____ A)	_____ W
(-12 V) X (_____ A)	_____ W
(5 V standby) X (_____ A)	_____ W
Total Combined Wattage	_____ W

**CAUTION**

Do not exceed a combined power output of 140 Watts for the +5 V and +3.3 V outputs. Exceeding a combined 140 Watts will overload the power subsystem and may cause the power supplies to overheat and malfunction.

Regulatory and Compliance Information

Product Regulatory Compliance

Product Safety Compliance

The Intel® Server Chassis SC5300 complies with the following safety requirements:

- UL60950 – CSA 60950(USA / Canada)
- EN60950 (Europe)
- IEC60950 (International)
- CB Certificate & Report, IEC60950 (report to include all country national deviations)
- GS License (Germany)
- GOST R 50377-92 - License (Russia)
- Belarus License (Belarus)
- Ukraine License (Ukraine)
- CE - Low Voltage Directive 73/23/EEE (Europe)
- IRAM Certification (Argentina)
- GB4943- CNCA Certification (China)

Product EMC Compliance – Class A Compliance

The Intel® Server Chassis SC5300 has been tested and verified to comply with the following electromagnetic compatibility (EMC) regulations. For information on compatible host system(s) refer to Intel's Server Builder Web site or contact your local Intel representative.

- FCC /ICES-003 - Emissions (USA/Canada) Verification
- CISPR 22 – Emissions (International)
- EN55022 - Emissions (Europe)
- EN55024 - Immunity (Europe)
- EN61000-3-2 - Harmonics (Europe)
- EN61000-3-3 - Voltage Flicker (Europe)
- CE – EMC Directive 89/336/EEC (Europe)
- VCCI Emissions (Japan)
- AS/NZS 3548 Emissions (Australia / New Zealand)
- BSMI CNS13438 Emissions (Taiwan)
- GOST R 29216-91 Emissions (Russia)
- GOST R 50628-95 Immunity (Russia)
- Belarus License (Belarus)
- Ukraine License (Ukraine)
- RRL MIC Notice No. 1997-41 (EMC) & 1997-42 (EMI) (Korea)
- GB 9254 - CNCA Certification (China)
- GB 17625 - (Harmonics) CNCA Certification (China)






Certifications / Registrations / Declarations

- UL Certification (US/Canada)
- CE Declaration of Conformity (CENELEC Europe)
- FCC/ICES-003 Class A Attestation (USA/Canada)
- VCCI Certification (Japan)
- C-Tick Declaration of Conformity (Australia)
- MED Declaration of Conformity (New Zealand)
- BSMI Certification (Taiwan)
- GOST R Certification / License (Russia)
- Belarus Certification / License (Belarus)
- RRL Certification (Korea)
- IRAM Certification (Argentina)
- CNCA Certification (China)
- Ecology Declaration (International)

Product Regulatory Compliance Markings

This product is marked with the following Product Certification Markings:

Table 9. Product Certification Markings

Regulatory Compliance	Country	Marking
cULus Listing Marks	USA/Canada	
GS Mark	Germany	 
CE Mark	Europe	
FCC Marking (Class A)	USA	This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Manufactured by Intel Corporation
EMC Marking (Class A)	Canada	CANADA ICES-003 CLASS A CANADA NMB-003 CLASSE A
VCCI Marking (Class A)	Japan	この装置は、クラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。VCCI-A
Regulatory Compliance	Country	Marking
BSMI Certification Number & Class A Warning	Taiwan	

		警告使用者： 這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策
GOST R Marking	Russia	
RRL MIC Mark	Korea	
China Compulsory Certification Mark	China	

Electromagnetic Compatibility Notices

FCC (USA)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions related to the EMC performance of this product, contact:

Intel Corporation
5200 N.E. Elam Young Parkway
Hillsboro, OR 97124
1-800-628-8686

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.

- Connect the equipment to an outlet on a circuit other than the one to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment. The customer is responsible for ensuring compliance of the modified product.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class A or B limits may be attached to this computer product. Operation with noncompliant peripherals is likely to result in interference to radio and TV reception.

All cables used to connect to peripherals must be shielded and grounded. Operation with cables, connected to peripherals that are not shielded and grounded may result in interference to radio and TV reception.

Industry Canada (ICES-003)

Cet appareil numérique respecte les limites bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le Ministre Canadien des Communications.

English translation of the notice above:

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Canadian Department of Communications.

Europe (CE Declaration of Conformity)

This product has been tested in accordance too, and complies with the Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC). The product has been marked with the CE Mark to illustrate its compliance.

VCCI (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

English translation of the notice above:

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI) from Information Technology Equipment. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

BSMI (Taiwan)

警告使用者：
這是甲類的資訊產品，在居住的環境中使用時，
可能會造成射頻干擾，在這種情況下，使用者會
被要求採取某些適當的對策

The BSMI Certification Marking and EMC warning is located on the outside rear area of the product.

Korean RRL Compliance



1. 기기의 명칭(모델명) :
2. 인증번호 :
3. 인증받은 자의 상호 :
4. 제조년월일 :
5. 제조자/제조국가 :

English translation of the notice above:

1. Type of Equipment (Model Name): On License and Product
2. Certification No.: On RRL certificate. Obtain certificate from local Intel representative
3. Name of Certification Recipient: Intel Corporation
4. Date of Manufacturer: Refer to date code on product
5. Manufacturer/Nation: Intel Corporation/Refer to country of origin marked on product

Regulated Specified Components

To maintain the UL listing and compliance to other regulatory certifications and/or declarations, the following regulated components must be used and conditions adhered to. Interchanging or use of other component will void the UL listing and other product certifications and approvals.

Updated product information for configurations can be found on the Intel Server Builder Web site at the following URL:

<http://channel.intel.com/go/serverbuilder>

If you do not have access to Intel's Web address, please contact your local Intel representative.

- **Server Chassis** (base chassis is provided with power supply and fans)—UL listed.
- **Server board**—you must use an Intel server board—UL recognized.
- **Add-in boards**—must have a printed wiring board flammability rating of minimum UL94V-1. Add-in boards containing external power connectors and/or lithium batteries must be UL recognized or UL listed. Any add-in board containing modem telecommunication circuitry must be UL listed. In addition, the modem must have the appropriate telecommunications, safety, and EMC approvals for the region in which it is sold.
- **Peripheral Storage Devices**—must be UL recognized or UL listed accessory and TUV or VDE licensed. Maximum power rating of any one device is 19 watts. Total server configuration is not to exceed the maximum loading conditions of the power supply.

Getting Help

World Wide Web

<http://support.intel.com/support/motherboards/server/chassis/SC5300>

Telephone

All calls are billed US \$25.00 per incident, levied in local currency at the applicable credit card exchange rate plus applicable taxes. (Intel reserves the right to change the pricing for telephone support at any time without notice).

In U.S. and Canada		1-800-404-2284	
In Europe			
UK	0870 6072439	Finland	9 693 79297
France	01 41 918529	Denmark	38 487077
Germany	069 9509 6099	Norway	23 1620 50
Italy	02 696 33276	Sweden	08 445 1251
Spain	91 377 8166	Holland	020 487 4562
Belgium	02 714 3182		
In Asia-Pacific region			
Australia	1800 649931	Malaysia	1-800 80 1390
Hong Kong	852 2 844 4456	New Zealand	0800 444 365
Korea	822 767 2595	Pakistan	632 6368415 (IDD via
China	800 820 1100 (toll free)	Philippines)	
	8 621 33104691 (non toll free)	Philippines	1-800 1 651 0117
Singapore	65 6213-1311	Thailand	1-800 6310003
Taiwan	2 2545-1640	Vietnam	632 6368416 (IDD via
India	0006517-2-6830 3634 (manual toll free.	Philippines)	
From India, you need an IDD-equipped phone)		Myanmar	63 2 636 9796 (via Philippines)
Indonesian	803 65 7249	Cambodia	63 2 636 9797 (via Philippines)
In Japan			
0120-868686 (Domestic)		81-298-47-0800 (outside country)	

In Latin America

Brazil	001-916-377-0180	Ecuador (Pacifictel)	contact AT&T USA by dialing 1-800-225-528; once connected, dial 800-843-4481
Mexico	contact AT&T USA by dialing 001-800-462-4240; once connected, dial 800-843-4481	Guatemala	contact AT&T USA by dialing 99-99-190; once connected, dial 800-843-4481
Colombia	contact AT&T USA by dialing 01-800-911-0010; once connected, dial 800-843-4481	Venezuela	contact AT&T USA by dialing 0-800-2255-228; once connected, dial 800-843-4481
Costa Rica	contact AT&T USA by dialing 0-800-0-114-114; once connected, dial 800-843-4481	Argentina	contact AT&T USA by dialing 1-800-222-1288; once connected, dial 800-843-4481
Panama	contact AT&T USA by dialing 00-800-001-0109; once connected, dial 800-843-4481	Paraguay	001-916-377-0114
Chile (Easter Island)	contact AT&T USA by dialing 800-800-311; once connected, dial 800-843-4481	Peru	001-916-377-0114
Chile (Mainland and Juan)	contact AT&T USA by dialing 800-225-288; once connected, dial 800-843-4481	Uruguay	001-916-377-0114
Ecuador (Andimate)	contact AT&T USA by dialing 1-999-119; once connected, dial 800-843-4481		
Miami	1-800-621-8423		

For an updated support contact list, see <http://www.intel.com/support/9089.htm/>

Warranty

Limited Warranty for Intel® Chassis Subassembly Products

Intel warrants that the Products (defined herein as the Intel® chassis subassembly and all of its various components and software delivered with or as part of the Products) to be delivered hereunder, if properly used and installed, will be free from defects in material and workmanship and will substantially conform to Intel's publicly available specifications for a period of three (3) years after the date the Product was purchased from an Intel authorized distributor. Software of any kind delivered with or as part of products is expressly provided "as is" unless specifically provided for otherwise in any software license accompanying the software.

If any Product furnished by Intel which is the subject of this Limited Warranty fails during the warranty period for reasons covered by this Limited Warranty, Intel, at its option, will:

- **REPAIR** the Product by means of hardware and/or software; OR
- **REPLACE** the Product with another Product; OR
- **REFUND** the then-current value of the Product if Intel is unable to repair or replace the Product.

If such Product is defective, transportation charges for the return of Product to buyer within the USA will be paid by Intel. For all other locations, the warranty excludes all costs of shipping, customs clearance, and other related charges. Intel will have a reasonable time to make repairs or to replace Product or to refund the then-current value of the Product.

In no event will Intel be liable for any other costs associated with the replacement or repair of Product, including labor, installation or other costs incurred by buyer and in particular, any costs relating to the removal or replacement of any product soldered or otherwise permanently affixed to any printed circuit board.

This Limited Warranty, and any implied warranties that may exist under state law, apply only to the original purchaser of the Product.

Extent of Limited Warranty

Intel does not warrant that Products to be delivered hereunder, whether delivered stand-alone or integrated with other Products, including without limitation semiconductor components, will be free from design defects or errors known as "errata." Current characterized errata are available upon request.

This Limited Warranty does not cover damages due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing.

Warranty Limitations and Exclusions

These warranties replace all other warranties, expressed or implied including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Intel makes no expressed warranties beyond those stated here. Intel disclaims all other warranties, expressed or implied including, without limitation, implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow the exclusion of implied warranties, so this limitation may not apply.

All expressed and implied warranties are limited in duration to the limited warranty period. No warranties apply after that period. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

Limitations of Liability

Intel's responsibility under this, or any other warranty, implied or expressed, is limited to repair, replacement, or refund, as set forth above. These remedies are the sole and exclusive remedies for any breach of warranty. Intel is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty under another legal theory including, but not limited to, lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering, reprogramming, or reproducing any program or data stored in or used with a system containing this product. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights that vary from jurisdiction to jurisdiction.

Any and all disputes arising under or related to this Limited Warranty shall be adjudicated in the following forums and governed by the following laws: for the United States of America, Canada, North America, and South America, the forum shall be Santa Clara, California, USA, and the applicable law shall be that of the State of California, USA; for the Asia Pacific region, the forum shall be Singapore and the applicable law shall be that of Singapore; for Europe and the rest of the world, the forum shall be London and the applicable law shall be that of the United Kingdom.

In the event of any conflict between the English language version and any other translated version(s) of this Limited Warranty, the English language version shall control.

How to Obtain Warranty Service

To obtain warranty service for this Product, you may contact Intel or your authorized distributor.

North America and Latin America—To obtain warranty repair for the product, please go to the following Web site to obtain instructions:

<http://support.intel.com/support/motherboards/draform.htm>

In Europe and in Asia—Contact your original authorized distributor for warranty service.

Any replacement Product is warranted under this written warranty and is subject to the same limitations and exclusions for the remainder of the original warranty period.

Telephone Support

If you cannot find the information you need on Intel's World Wide Web site (<http://www.intel.com/>), call your local distributor or an Intel Customer Support representative. See "Getting Help" for telephone numbers.

Returning a Defective Product

Before returning any product, call your authorized dealer/distribution authority.